Responsiveness Summary
and
Concise Explanatory Statement

Chapter 173-173 WAC
Requirements for Measuring and Reporting Water Use

Administrative Order #00-01

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Introduction and Background

What is the purpose of this rule?

The Water Resource Program's (Program) purpose for this rule is to establish requirements for measuring and reporting water use. This rule will replace the existing rule, Chapter 508-64 WAC entitled "Measuring devices for water diversion and withdrawal facilities".

What is the statutory authority for this rule?

RCW 43.21A.064(8)	Department of Ecology
RCW 43.27A(090)(11)	Water Resources
Chapter 90.03.360	Water Code
Chapter 90.44.050, 250 and 450	Regulations of Public Ground Waters

When is this rule scheduled for adoption and when will it become effective?

The rule is scheduled for adoption on December 19th. The rule will become effective thirty-one days after it is filed with the Office of the Code Reviser.

What are the differences between the proposed rule and the rule that is being adopted?

As a result of public comment and additional internal review, the adopted rule has been revised from the version known as the proposed rule. Those revisions are discussed below. The text of the proposed rule change is in strikethrough format and the new text is underlined.

Chapter 173-173 WAC
REQUIREMENTS FOR MEASURING AND REPORTING WATER USE

WAC 173-173-010 What is the purpose of this rule? (1) This rule establishes standards of acceptability for measuring devices and methods, and requirements for recording and reporting water use data.

(2) All measuring devices or measuring methods required to be installed under this chapter must conform to requirements for measuring devices and methods described in this chapter, or other method(s) approved by the department.

WAC 173-173-015 What are the goals of this rule?
(1)The department seeks to ensure the reliable, accurate measurement of state water that is diverted, withdrawn, stored and used so that sound decisions may be made in administering state water laws and regulations.
(2) The department has the following specific goals for the enforcement of water measurement and the reporting of measurement data:

determining whether water is available for appropriation;
assessing and enforcing water rights compliance;
(c) understanding the hydrology of surface and ground waters;
(d) protecting instream resources;
(e) managing and planning the state's watersheds;
(f) informing water users about how much and when water is used.

REASON FOR CHANGE

Based on internal review, the department decided to add a provision describing its goals for the water measuring rule.

WAC 173-173-020 What is the authority for this rule? (1) RCW 90.03.360 directs the department of ecology to require that diversions allowed by all new surface water permits be either metered or measured by other approved methods.

(2) RCW 90.03.360 also directs the department to require metering or measurement by other approved methods as a condition for all previously existing water rights or claims if:

(a) The diversion or withdrawal is from waters in which the salmonid stock status is depressed or critical, as determined by the Washington department of fish and wildlife; or

(b) The ~~volume~~flow rate of the surface water diversion exceeds one cubic foot per second.

(3) RCW 90.44.050, RCW 90.44.250 and RCW 90.44.450 give the department authority to require that ground water withdrawals are measured, and to require that information about the amount of water being withdrawn be reported to the department.

REASON FOR CHANGE

Volume has been changed to flow rate because one cubic feet per second describes a volume of water per unit time, or rate of flow.

WAC 173-173-040 To whom does this rule apply? The requirements of this chapter apply to the owner or owners of any source water diversion or source withdrawal and to the department.

(1) Any owner or owners of any surface water diversion are required by state law (RCW 90.~~06~~03.360) to measure and regulate their water use.

(2) The department must enforce the requirement to measure water use for the following types of water use:

(a) All new surface water permits;

(b) New and existing surface water rights where the diversion ~~or withdrawal~~ of any volume of water is from waters containing depressed or critical ~~fish~~ salmonid stock; ~~and~~

(c) New and existing ground water rights where the department concludes that the withdrawal of any volume of water may affect surface waters containing depressed or critical salmonid stock;

(d) Existing surface water rights where the diversion volume exceeds one cubic foot per second.

(3) This chapter only applies to source diversions and withdrawals and is not intended to apply to customers of a municipality or public water supply system or members of an irrigation district or similar secondary users.

REASON FOR CHANGE

The department has added language to the first paragraph of this section to clarify that the rule applies to source diversions and withdrawals, meaning the point at which state water is initially diverted or withdrawn. That is, it is not the intent of the rule to apply to customers of municipalities, members of irrigation districts or similar secondary users. A new subsection 3 has been added with language that makes this explicit.

Subsection 1 has been revised to clarify that it is surface water diverters who, as a matter of law, have a duty to measure their use regardless whether the department compels them to do so.

Subsection 1 also has been revised to address a typographical error in which RCW 90.03.360 was referred to as 90.06.360.

Subsection 2 has been revised as follows: In Subsection 2(b) "fish" has been replaced with "salmonid" to more accurately conform to the RCW 90.06.360 and to the department of fish and wildlife's SaSI report, which addresses salmonid stocks only.

Subsection 2(b) also has been revised so that "or withdrawal" is deleted. A new subsection 2(c) now addresses the applicability of the rule to ground water withdrawals: measurement is mandatory where the department has a basis for believing that the ground water use of

any volume may affect surface water containing salmonids considered to be critical or depressed. What was formerly subsection 2(c) is now subsection 2(d).

WAC 173-173-030 Definitions. (1) "Approved measuring device" means an instrument or facility constructed and operated in conformance with the requirements of this chapter and that measures the volume or flow rate of water which is diverted, withdrawn, ~~delivered, received, transported, conveyed, pumped, recharged,~~ stored, ~~recovered,~~ or used.

(2) "Approved measuring method" means a procedure approved by the department, which, when used with an approved measuring device (if applicable), will allow for an accurate computation of flow rate.

(3) "Control" means a feature that determines the stage-discharge relation. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

(4) "Cfs" means cubic feet per second.

(5) "Controlling work" means a device or structure used for diverting, withdrawing, pumping, impounding, storing, measuring, piping, conserving, conveying, confining or using water.

(6) "Department" means the department of ecology.

(7) "Diversion" means to divert water from one course to another. Diversion, when used without qualification, includes the diversion of surface water and the withdrawal of ground water.

(8) "Flow rate" means the volume of water that passes through a specific cross section of a pipe or open channel in a specified period of time.

~~(8)~~(9) "Gpm" means gallons per minute.

~~(9)~~(10) "Open channel flow" means water moving though a canal, flume, ditch, or other unenclosed conduit, and may include flow in a pipe if the pipe is not full and is not under pressure.

~~(10)~~(11) "Pipeflow" means water moving through a closed conduit under pressure.

~~(11)~~(12) "Rated section" means a cross-section of a stream, river or ditch where a unique relationship between the stage and flow rate has been determined.

~~(12)~~(13) "Rating curve" means the relationship between stage and flow rate in a rated stream section.

~~(13)~~(14) "Responsible party" means an owner, owners, manager, ~~person or other entity~~or appropriator required by RCW 90.03.360, RCW 90.44.050, RCW 90.44.250 and RCW 90.44.450, or by a permit, rule, or order issued pursuant to these laws, to use a measuring device or method approved by the department.

~~(14)~~(15) "Stage" means the elevation of a water surface in relation to a datum or reference point.

REASON FOR CHANGE

The definitions section has been re-numbered as WAC 173-173-045. The department feels that it was better to organize the rule such that a reader could read the rule applicability section (WAC 173-173-040) before subsequent portions of the rule.

The definition of "approved measuring device" has been simplified and clarified to apply to water that is diverted, withdrawn, stored and used. The department concluded that this

definition is more consistent with the department's intent to require measurement of source diversions and withdrawals and reservoir storage and, in the case of groundwater, the manner and extent of beneficial use (as provided for by RCW 90.44.250).

In addition, we have added a definition for "diversion" to make it clear that, unless otherwise qualified, "diversions" include both diversions of surface water and withdrawals of groundwater.

WAC 173-173-050 ~~Am I required to report information~~ What water use information may the department require regarding my water use? (1) The department may require any responsible party to report data describing the volume of water ~~diverted or~~diverted, withdrawn, used or stored, and other related information.

(2) If a responsible party is required to report information regarding water use, the report must be submitted on a form or in a format prescribed by the department and must include such information as requested by the department. The department may require that the information be submitted in writing or electronically. This information may include, but is not limited to, the following:

(a) The name, address and telephone number of the responsible party;

(b) The location of the point(s) of diversion or withdrawal, the place(s) of use and metering site(s);

(c) The county parcel identification number for the point(s) of diversion or withdrawal, and place(s) of use or area served by the diversion or withdrawal, except that municipalities, public water supply systems and irrigation districts shall not be required to provide parcel identification numbers for their customers, members and secondary users.

(d) The water right number(s) or claim number(s) or other information that indicate the legal basis for the diversion or withdrawal;

(e) The volume and/or flow ~~or~~ rate of water~~s~~ diverted or withdrawn~~, preferably as measured in cubic feet per second, gallons per minute or acre-feet per year~~.

~~(f) The maximum instantaneous quantity of water diverted or withdrawn for the reporting period as provided for in WAC 173-173-060;.~~

~~(g)~~(f) The make, model and serial number of the measuring device(s) and any separable counting units;

~~(h)~~(g) The date the device was last calibrated;

~~(i)~~(h) Any date(s) during which the meter or measuring device was not functioning properly;

~~(j)~~(i) For flow rate data based upon power consumption, electrical records, pump test data, or other data necessary to verify flow rate estimates;

~~(k)~~(j) Whether the intake structure for the diversion has a screen or screens installed to prevent the entry of fish into the diversion works or pump facilities;

~~(l)~~(k) The water source name;

~~(m)~~(l) For public water systems, the public water system identification number and source number assigned by the department of health.

~~(3) All responsible parties must~~notify the department of a change in address or change in ownership of water rights.

(43) All responsible parties must attest that the information provided is true and correct to the best of their knowledge.

(4) The department may accept water use information from a stream patrolman on behalf of a responsible party.

REASON FOR CHANGE

The title of this section has been changed to more accurately reflect the contents of the section.

Subsection 1 of this section has been revised to included "stored or used." This is to make it more consistent with phrasing elsewhere in the rule.

Subsection 2(d)has been modified to include the phrase "other information" to address situations where there may be other information (e.g., a certificate of change) that indicates the legal basis of a water right.

Subsection 2(e) has been revised so that "rate" is modified by "flow". The language, "…preferably as measured…in acre feet per year" has been deemed unnecessary and deleted.

Subsection 2(f) has been deleted because it is deemed redundant in light of the language in subsection 2(e).

Subsection 2(j) in the proposed version is now subsection 2(i); the word "rate" has been added after "flow" in two instances to clarify that it is the flow rate that is being referred to in this subsection.

Subsection 2(m)is now subsection 2(l) and includes a reference to "source number," which is a number the department of health uses to identify the diversions and withdrawals for water supply systems. This will help this department and the department of health coordinate water use data management.

Subsection 3 has been deleted because it was deemed to be beyond the authority of the water measurement statute. The department will rely upon annual reporting to maintain up to date records regarding water rights ownership, rather than impose a duty upon water right owners to notify the department whenever changes in ownership occur.

Subsection 4 has been added to allow the department to accept water use data from a stream patrolman on behalf of a responsible party.

WAC 173-173-060 If I must report data regarding my water use, how shall I report it?
~~(1) Every responsible party shall report the maximum instantaneous discharge of water diverted or withdrawn over the reporting~~
~~period, except that for responsible parties who already measure or report according to the terms of a water right, such parties will remain bound by such terms until directed to modify the manner in which they report their water use by the department.~~

~~(2)~~(1) The following requirements to measure and report water use, when the department so requires, shall apply to ~~users~~responsible parties who divert or withdraw water.

Recording and Reporting Requirements				
~~Average diversion rate in gallons per minute~~	~~<10 gpm~~	~~10-50 gpm~~	~~>50-200~~	~~>200 gpm~~
Average diversion rate in gallons per minute	<10 gpm	10--49gpm	>50 gpm	
~~Recording frequency~~	~~Monthly~~	~~Weekly~~	~~Weekly~~	~~Daily~~
Recording frequency	Monthly	Bi-Weekly	~~Maximum instantaneous flow~~ Weekly	~~Maximum instantaneous flow~~
~~Volume or rate to report~~ Volume or rate to report	~~Maximum instantaneous flow~~ Maximum rate of diversion ~~Annual total volume~~	~~Maximum instantaneous flow~~ Maximum rate of diversion ~~Annual total volume~~	Maximum rate of diversion ~~Annual total volume~~ Annual total volume ~~Mean daily flow for each month~~	~~Annual total volume~~ ~~Mean daily flow for each month~~
	Annual total volume	Annual total volume		
~~Date data must be reported to department~~	~~By Mar 31 of the following calendar year~~	~~By Feb 28 of the following calendar year~~	~~By Jan 31 of the following calendar year~~	~~By Jan 31 of the following calendar year~~
Date data must be reported to department	By Jan. 31 of the following calendar year	By Jan. 31 of the following calendar year	By Jan 31 of the following calendar year	
~~Monthly .= Calendar month~~				
Monthly means Calendar month				

~~Weekly .= Monday 12:01 a.m. to Sunday 12:00 p.m.~~
Weekly ismeans Monday 12:01 a.m. to Sunday 12:00 p.m. Bi-weekly means once every two weeks
~~Daily = 12:01 a.m. to 12:00 p.m.~~
Daily means 12:01 a.m. to 12:00 p.m.
1 gallon per minute is equivalent to .002 cubic feet per second

(2) Where a device capable of indicating flow rate is not installed, a responsible party may determine the maximum flow rate by measuring the volume of water that is diverted over a brief time period when the system is operating under maximum demand.

REASON FOR CHANGE

In this section, we have deleted subsection 1 of the proposed rule because it was deemed unnecessary. Subsection 3 of the proposed rule is now subsection 1.

"Discharge" has been replaced by "flow rate" to make it consistent with language elsewhere in the rule.

A new subsection 2 has been added, authorizing the use of indirect measurements where a measuring device capable of measuring instantaneous flow is not installed, provided that the indirect measurements are representative of the system when operating at maximum demand.

In addition, "users" has been replaced with "responsible parties." The purpose of this change is to make this subsection consistent with the use of the term "responsible parties" throughout the rule.

In the table for reporting requirements. A number of changes have been made that affect the frequency at which a responsible party would be required to record his diversion or withdrawal. The effect of the changes is to relax the frequency for those users required to report who divert or withdraw 10 gallons per minute or more. We also have added "rate" after flow in the table to make the table conform to the use of "flow rate" throughout the rule.

For all users whom the department requires to report, the revised table specifies that January 31 of the following calendar year is the deadline for the reporting of annual data. In the proposed rule, different dates had been specified for different thresholds of users. The purpose of this change is to simply interpretation and administration of the rule.

Finally, in the lower portion of the table, the equal signs have been replaced by "means." The purpose of this change is to improve the readability of the rule.

~~WAC 173-173-070 Can I report my water use data in a different format than the one prescribed by the department? If approved in writing in advance by the department, responsible parties can substitute equivalent information for the information required on the reporting form, use reporting formats different from those specified in the reporting requirements or submit the information on a different date than specified in the reporting requirements described in WAC 173-173-060.~~

REASON FOR CHANGE

This section has been deleted and replaced by 173-173-175 authorizing responsible parties to request a variance from the technical and reporting requirements contained in the rule.

WAC 173-173-080 Can the department modify the reporting requirements on a case-by-case basis? (1) Yes. The department may modify the reporting requirements in WAC 173-173-060 of this chapter if it concludes that different reporting requirements are necessary ~~to:~~to meet the water measurement and reporting goals described in WAC 173-173-015.

~~(a) Verify water rights compliance;~~

~~(b) Determine the availability of water for further appropriation;~~

~~(c) Conduct hydrologic studies;~~

~~(d) Implement the recommendation of a watershed planning group.~~

(2) The department ~~shall not modify the reporting requirements on a case-by-base basis unless it has provided~~will provide a written justification and notification to the responsible party.

REASON FOR CHANGE

We have inserted "Yes" after the heading to explicitly signify the answer to the question in the heading.

We have modified this section to ensure that it references WAC 173-173-015, which contains the department's goals for water measurement and reporting. The purpose of this change is to ensure that when the department does modify reporting requirements, it only does so when it clearly relates to the goals of this rule. Subsection 2 has been modified to provide that the department "will" provide a written justification and notification instead of shall. The purpose of this change was to improve the readability of this subsection.

WAC 173-173-090 What are the general requirements for measuring devices? (1) No withdrawal or diversion of water shall be made unless the measuring devices and facilities are in proper operating condition, except when:

(a) A measuring device or facility is being repaired according to the requirements of subsection (2) or (3) of this section; and

(b) The responsible party uses a substitute measuring device or other method to measure the diversion or withdrawal or to provide a reasonable estimate thereof.

(2) Upon discovery of a malfunctioning measuring device or facility, the responsible party shall repair the device or facility and make them operable as soon as possible.

(3) ~~The~~If a responsible party does not comply with WAC 173-173-(090)2, the department may order that a measuring device or facility be repaired or replaced within a specified time period.

(4) Measuring devices and facilities must register and be calibrated for the full range of discharge from the diversion or withdrawal for which they are to be used.

(5) On an open channel diversion, all flow diverted shall be measured as close to the point of diversion as possible.

(6) There shall be no turnouts or diversions between the source of water and the measuring devices and facilities, except for faucets or others~~similar~~ small outlets that have a *de minimis* effect on the diversion or withdrawal.

(7) In those cases where wells are authorized for the purpose of supplementing surface waters with water from combined sources, both sources of water shall be metered.

(8) In the case of intermittent artesian wells, the meter shall be installed in a manner that will measure both pumped and flowing discharge.

~~(9) Authorized employees of the department shall have access to the measuring devices and facilities if the department has given reasonable notice to the property owner.~~

~~(10) The department may modify the required degree of measurement accuracies provided for in WAC 173-173-100(2) or 173-173-130(1) when it determines that a different degree of measurement accuracy is appropriate for the purpose for which the data is being collected. A responsible party may request a change in the default accuracies listed in WAC 173-173-100(2) or 173-173-130(1) and the department shall determine if the change is appropriate. All such requests or any department determinations concerning a change to the default accuracy shall be in writing.~~

REASON FOR CHANGE

Subsection 3 of this section has been revised to provide that the department may only issue a repair order if the user is not taking action to repair a malfunctioning measuring device or facility.

Subsection 4 of this section has been revised such that "or withdrawal" has been inserted after diversion. This is to make it clear that both surface and groundwater withdrawals are covered by this section.

In subsection 6, we have deleted "similar" after outlet because it was deemed unnecessary.

Subsection 9 of this section dealing with private property access has been deleted. The department will continue to exercise its enforcement authority in conformance with the appropriate statutes and department policy.

Subsection 10, which granted a variance from the default measurement accuracy standards, has been stricken. Instead, we have inserted an entirely new subsection, WAC 173-173-175, which contains a variance clause applicable to measurement accuracy.

WAC 173-173-100 What are the specific requirements for meters for pressure systems?
(1) At any ~~rate of flow~~flow rate measured by the meter, the meter itself shall be rated by the manufacturer to register not less than ninety-five percent, nor more than one hundred five percent, of the water actually passing through the meter.

(2) At any ~~rate of flow~~flow rate measured by the measuring system; i.e., meter plus any secondary equipment such as data recorders; the system shall register not less than ninety percent, nor more than one hundred ten percent, of the water actually passing through the system.

~~(3) The department may modify the required degree of measurement precision when it determines that a different degree of measurement precision is appropriate for the purpose for which the data is being collected. A responsible party may request a change in the default accuracy listed in subsections (1) and (2) of this section and the department shall make a determination if the change is appropriate. All such requests or any department determinations concerning a change to the default accuracy shall be in writing.~~

~~(4)~~ (3) The meter shall have a visual~~, mechanical, or digital~~ totalizer or the facility ~~should~~shall be capable of totalizing the flow. The totalizer shall contain sufficient recording digits to ensure that "roll over" to zero does not occur ~~within one year.~~
before the next recording period.

~~(5)~~(4) The department may require that the measuring device be capable of indicating ~~instantaneous discharge.~~flow rate as well as totalized flow.

~~(6)~~(5) For other conditions necessary to ensure accurate and precise measurement data, the selection, installation and maintenance of measuring devices by water users shall be guided by generally accepted industry standards, such as the American Water Works Association

standards and information from the manufacturer. These standards also shall be used by the department in making decisions as to the appropriate selection, installation, operation and maintenance of measuring devices acceptable under this rule.

REASON FOR CHANGE

In subsections 1 and 2, "rate of flow" has been changed to "flow rate" to ensure consistency with language throughout the rule.

Subsection 3 has been stricken. It was redundant of language in section 090(10). In addition, new variance section, WAC 173-173-175 authorized variances on measurement accuracy.

In subsection 4, "mechanical or digital" has been deleted because it was deemed unnecessary. The key thing for a totalizer is for it to have visual display that shows the quantity of water that has passed through and/or flow rate.

Also in subsection 4, language regarding the prevention of roll-over before one year has been changed to language providing that roll-over shall not occur before the next recording period. The purpose of this change is to address those situations where responsible parties record their meters more frequently than annually. The important thing is that roll-over does not occur before the next time that meter is read.

Subsection 5 has been revised to provide that the department may require that the meter be capable of indicating flow rate as well as totalized flow, rather than "maximum instantaneous discharge." This is because "flow rate" includes all rate of flow, including maximum discharge.

WAC 173-173-110 What are the installation requirements for meters on pressure systems? Meters required under this rule shall meet the following installation requirements:

(1) The meter shall be installed in accordance with manufacturer specifications.

(2) There shall be a full pipe of water at all times when water is being withdrawn.

(3) The meter shall not be installed in a manner that creates an uneven velocity profile. Straight sections of pipe before and after the meter, straightening vanes or other flow conditioning devices shall be used to provide even flow through the meter as necessary.

~~(4) Meters shall be installed in such a manner as to allow for easy removal and testing of the meter in accordance with the manufacturer's specifications.~~

REASON FOR CHANGE

In subsection 1, we have deleted the sentence, "Of particular importance…." We concluded that this statement would be more appropriate in the context of technical guidance.

We have deleted subsection 4 because we concluded it would impracticable for very large measuring devices to be easily removed.

WAC 173-173-120 What are the operation and maintenance requirements for meters on pressure systems? (1) Meters shall be inspected and maintained as specified by the manufacturer.

(2) Meters shall be field or shop calibrated, as specified by the manufacturer. Meters also shall be field or shop calibrated and/or repaired if they are ~~obviously~~ over or under registering. ~~For certain nonmechanical meters,~~ ~~system~~ System diagnostics may substitute for physical calibration of ~~the meter.~~ non-mechanical meters.

REASON FOR CHANGE

In subsection 2, we have added new language, "…and/or repaired…" after "shop calibrated." The purpose of this language is to ensure that a responsible party repairs, not merely calibrates, his measuring device if it is necessary. In this same subsection, we have stricken "obviously" because, we concluded that "obviously" was too subjective a term. The new language provides that if a responsible party knows a meter is over or under-registering, then he should have the device calibrated and/or repaired.

We also have stricken "for certain non-mechanical meters" in the last sentence and added "non-mechanical" after "…calibration of…." We concluded that the phrase, "for certain" was unclear as to which non-mechanical meters would apply. The sentence now simply provides that system diagnostics may substitute for physical calibration of non-mechanical meters.

WAC 173-173-130 What are the specific requirements for measuring systems on open channels? The following requirements apply to weirs, flumes, ramps and orifices. For other devices, the department will determine specific requirements on a case-by-case basis.

(1) At any ~~rate of flow~~flow rate measured by the measuring system; i.e., the measuring device plus any secondary equipment such as data recorders; the system shall register not less than ninety percent, nor more than one hundred ten percent, of the water actually passing through the system.

(2) In determining a stage-discharge relation for these devices, the distribution of open channel flow measurements shall be sufficient to establish a full range of values for the entire stage-discharge relation.

(3) For other conditions necessary to ensure accurate and precise data, generally accepted industry standards, such as those in the U.S. Bureau of Reclamation *"Water Measurement Manual, Third Edition"* and information from the manufacturer or designer, shall guide the selection, installation, and maintenance of measuring devices and facilities by water users. The department also shall use these standards in evaluating the selection, installation, operation and maintenance of ~~a~~the measuring system.

REASON FOR CHANGE

In subsection 1, "rate of flow" has been revised to "flow rate" to ensure consistency with language used throughout the rule.
In the last sentence of this subsection, "a" has been replaced by "the for purposes of readability.

WAC 173-173-140 What are the installation requirements for open channel measuring systems? The measuring facility shall be installed or constructed in accordance with the manufacturer's and/or designer's specifications. ~~Particular care in constructing open channel measuring facilities (for example, in ensuring exact elevations) is required to ensure accurate measurements.~~

REASON FOR CHANGE

The sentence beginning, "Particular care…" has been stricken because it was deemed more appropriate for technical guidance.

WAC 173-173-150 What are the operation and maintenance requirements for open channel measuring facilities? (1) Rating curves shall be recalculated when there is a change in channel conditions that significantly alters flow across the control or once a year, whichever is more frequent.

~~(2) The department may modify the required frequency for the recalculation of rating curves when it determines an alternative frequency would be adequate for the purposes of data collection. A responsible party may request a change in the default frequency listed in WAC 173-173-150(1) and the department shall make a determination if the change is appropriate. All such requests or any department determinations concerning a change to the default frequency shall be in writing.~~

~~(3)~~ (2) If the measuring system has no continuous stage recorder, an observer shall read the staff gage and record the reading as close in time as is practical before and after changes in regulation of flow occur.

~~(4)~~(3) Measuring facilities shall be operated and maintained to ensure that discharge can be measured ~~reliably and~~ accurately.

REASON FOR CHANGE

In this section, subsection 2 of the proposed rule has been deleted. This is because WAC 173-173-175 contains variance language authorizing the department to grant variances to the technical requirements contained in the rule, including the frequency of recalculating rating curves.

Subsection 3 is now subsection 2. Subsection 4 is now subsection 3. In the former subsection 4, we have stricken "reliably and" because it was deemed redundant to "accurately".

WAC 173-173-160 Under what conditions ~~are indirect measurements of flow allowed~~ is the use of power consumption data acceptable to the department? (1) Use of power consumption data may be substituted for more direct flow measurement methods ~~when it is impractical to install a meter and the conditions below are met;~~ ,provided:

(~~1~~a) Use of the method is approved in writing by the department;

(~~2~~b) ~~A power meter is dedicated to one pump only.~~ Installation of a water meter would be unduly burdensome to the water user;

(~~3~~c) ~~The ratio between power consumption and flow is evaluated at some time during the first year of use and every three years subsequent using a field pump test; and~~ The water system maintains a constant or near constant pumping or diversion rate;

(d) The power meter is dedicated to one diversion or withdrawal;

(~~4~~e) ~~The~~ A pump test ~~shall be~~is conducted for a minimum duration of two hours and ~~shall be~~is conducted under normal operating conditions;

(~~5~~f)The diversion or withdrawal is not a ~~This method shall not be used for~~ flowing artesian well~~s~~.

(~~6~~2) ~~For the first year, the following equation may be used when relying upon electrical power consumption to estimate volume or flow rate.~~ The equation below shall be used when relying upon electrical power consumption to estimate volume or flow rate. -This equation also may ~~also~~ be used to estimate flow during short periods of meter repair or maintenance if Ecology finds that reasonable estimates of pump and motor efficiency are available:

$$V = \frac{318{,}600(kWh)(P_{eff})(M_{eff})}{TDH}$$

Where:

V = volume of water pumped in gallons

318,600 = conversion factor,
kWh = number of kilowatt-hours for the time period in question; e.g. irrigation season, year or minutes,
P_{eff} = pump efficiency as a decimal,
M_{eff} = motor efficiency as a decimal, and
TDH = total dynamic head of the system in feet

~~(KWH)(1.34HP/KW)(Pumpeff.)(Motoreff.)(3960)~~

~~Q =~~

~~TDH~~

~~Where: Q = Flow in gallons per minute (gpm);~~
~~KWH = kilowatt hours used (from power records);~~
~~Pumpeff. = efficiency of pump (40-85%);~~
~~Motoreff. = motor efficiency (75-92%);~~
~~3960 = conversion factor, horsepower for lifting water (1 HP = 33,000 ft-lb/sec and a gallon of water weighs approximately 8.3 lb, therefore 33,000 divided by 8.3 = 3960); and~~
~~TDH = Total dynamic head = total elevation gain from water source level to pump to place of use plus discharge pressure of pump (in feet) plus friction losses.~~

REASON FOR CHANGE

The title of this section has been changed to more accurately reflect the subsection matter (i.e., the power consumption method).

In subsection 1, we have deleted those words beginning with "when it is" and substituted, "provided". This is followed by a number of what are now subsections detailing the conditions under which the power consumption method is acceptable.

Former section 1 is now subsection 1a.

Section 2 has been replaced by subsection 1b. The Section 2 language now appears in slightly modified form at subsection 1d. Subsection 1b provides that installation of a water meter must be unduly burdensome to the water user before the department will approve use of the power consumption method.

Section 3 is now subsection 1c. It now provides as a condition of approval for the power consumption method that the system maintains a constant or near constant diversion rate. The former language requiring an evaluation of the ratio of the power consumption and flow has been deleted. Because the general measurement requirements require calibration, that language is unnecessary.

Subsection 1d provides that the power meter is dedicated to diversion or withdrawal, as opposed to "pump," as it was written previously as section 2.

Former section 4, now subsection 1e, has been revised. "A" replaces "The" and "is" replaces "shall be." This is for the purpose of readability and to use a consistent tense.

Former section 5, now subsection 1f is clarified to read that the "diversion or withdrawal is not a flowing artesian well."

Former section 6 is now Section 2. The language in it has been revised to provide for a different equation provided in the previous draft. Based upon internal review, this equation was deemed more appropriate than the equation contained in the formal draft.

WAC 173-173-170 What alternative water measuring devices and methods can I use? Any responsible party may use an alternative water measuring device or method that differs from those described in this chapter, if:

(1) The method is approved in writing in advance by the department; and

(2) The device(s) and installation are certified by a registered professional engineer or other qualified person acceptable to the department to:

(a) Measure all flow diverted or withdrawn in accordance with the pipeflow or open channel accuracy requirements in WAC 173-173-100(2) and 173-173-130(1);

(b) Measure the appropriate volumes and flow rates in WAC 173-173-060;

(c) Be installed and operated according to the manufacturer's and/or designer's instructions, and other such conditions as the department may find necessary.

REASON FOR CHANGE

In subsection 2, we have added "or other person acceptable to the department" following professional engineer. This change is in response to comments that requiring certification by a professional engineer might be too burdensome for some responsible parties. The new language authorizes the reliance on another person acceptable to the department, that is, someone else who may not be a professional engineer but who nonetheless is qualified to certify the adequacy of an alternative measurement method.

In subsection 2b we have added "flow" before rates to clarify that "flow rates" are the kind of rates that are the subject of the subsection.

In subsection 2c we have added "and operated" after "installed" to ensure that the alternative method is operated as well as installed according to the manufacturer's instructions.

In subsection 2c we have added "and other such conditions as the department may find necessary." This is to authorize the department to impose additional conditions on alternative methods in order to provide assurance that the method will meet the department's satisfaction.

In subsection 2c, we have replaced "or" with "and/or" to address situations where one or the other is relevant.

WAC 173-173-175 May I request a variance from the technical and reporting requirements contained in this chapter? (1) Yes. Any responsible party may request in writing to the department a variance from the requirements of this chapter pertaining to the:
(a) Acceptable accuracies of measuring devices and methods;
(b) Reporting of water use data;
(c) Calculation of rating curves;
(d) Other provisions as the department may find acceptable.
(2) Provided, the department may not grant a variance from the requirements of WAC 173-173-040 or exempt a responsible party of its obligation to comply with RCW 90.03.360.
(3) No variance request shall be considered granted until the department has approved it in writing.

REASON FOR CHANGE

WAC 173-173-175 authorizes the department to grant a variance to the technical and reporting requirements contained in the rule. This section consolidates and simplifies language that had been contained in various sections (sections 070,090,100 and 150) of the proposed rule. It also provides that the department may not grant a variance from those requirements of law; for example, the department may not exempt a new surface water right from water measurement because RCW 90.03.360 mandates it as a matter of state law.

WAC 173-173-180 What recordkeeping responsibilities do I have? All measurement notes, rating curves, calculations, and data logs ~~shall be retained,~~should be retained as long as practicable, and copies made available to the department when requested.

REASON FOR CHANGE

We have changed the "shall" in this section to "should" and added "as long as practicable." This is out of recognition that it could be unduly burdensome to retain all records indefinitely. Also, as the department increases its data management capabilities, it will be less crucial for responsible parties to retain their records as the department will be storing water use data that is submitted to it.

WAC 173-173-190 Will the department notify the Washington department of fish and wildlife about the status of my fish screens? Yes. The department will notify the department of fish and wildlife regarding the status of fish screens associated with diversions and withdrawal facilities subject to this rule.

WAC 173-173-200 Does the department have authority to enforce this rule? Yes. In enforcing this chapter the department can impose such sanctions as are appropriate under the authorities vested in it, including, but not limited to, issuing regulatory orders under RCW 43.27A.190 and civil penalties under RCW 90.03.600.

WAC 173-173-210 Can I appeal the department's order to measure my water use? Yes. Appeals may be filed with the pollution control hearings board in accordance with RCW 43.21B.230, except that appeals of orders to measure water use issued by a court conducting a general adjudication of water rights pursuant to RCW 90.03.110 - 90.03.245 shall be filed in accordance with the applicable Washington Court Rules. ~~Appeals may be filed in accordance with the pollution control hearings board in accordance with RCW 43.21B.230.~~

REASON FOR CHANGE

This section has been revised out of recognition that in areas where an adjudication is occurring, all water claimants part of that adjudication are subject to the jurisdiction of the adjudicating court (e.g., a superior county court). Appeals of orders issued by the adjudicating court are not to the Pollution Control Hearings Board. They must be filed in accordance with the applicable Washington Court Rules.

WAC 173-173-220 Will the department review this rule in the future to determine if changes are necessary? Yes. The department will initiate a review of the rules established in this chapter if new information, changing conditions, or statutory modifications make it prudent or necessary to consider revisions to the chapter.

Summary of Comments and Agency Response

The program solicited both written comments and oral testimony on the proposed rule. The notice of the proposed rule was filed with the Code Reviser on July 31, 2001 and published in the State Register on August 15, 2001. A comment period and hearing notice on the proposed rule-making was mailed to about 2500 interested persons. The comment period extended from August 15 to September 24, 2001. The Water Resources Program conducted six public hearings. Following are the dates, places, and attendance*:

9/04/01	Tacoma		
	Tacoma Public Utilities Auditorium	Attendance: 7	Comments: 3
9/05/01	Bellingham		
	Whatcom County Council Chambers	Attendance: 14	Comments: 4
9/11/01	Walla Walla		
	Walla Walla Regional Airport	Attendance: 8	Comments: 2
9/12/01	Yakima		
	Davis High School	Attendance: 20	Comments: 7
9/13/01	Wenatchee		
	Chelan County Public Utilities Dist.	Attendance: 13	Comments: 2
9/17/01	Sequim		
	Guy Cole Mini Convention Center	Attendance: 150-250**	Comments: 13

* Low attendance on September 11, 12, and 13 was probably a result of the September 11 terrorist attacks.
** Attendance sheets show 150 sign-ins; actual count reached approximately 250.

Summary of Comments:

The primary issues raised at all hearings were: 1) the cost of installing measuring devices, 2) the fear that Ecology would require the owners of exempt withdrawals (domestic wells) to measure their water use, 3) measuring would likely lead to taxes, 4) enforcement and relinquishment.

Although the majority of the comments were opposed to the draft rule, several people expressed support, seeing it as a necessary step for the future of water management in Washington. Some people noted that they already measure their water use and the rule would create a more level playing field. One comment noted the value of measurement data in an adjudication.

Direct comments on the actual rule language numbered a half dozen or less.

The majority of the audience at the Sequim hearing were there to voice opposition to measurement of exempt withdrawals. Apparently a major local effort was made to get people to attend.

A list of commenters according to page number and public hearing locations can be found in the Table of Contents on page 1.

In both oral testimony and in written comments, a number of concerns were repeated by different commenters. Those concerns are highlighted here and a response is provided.

Does the rule apply to exempt withdrawals?

Yes.

Many commenters had questions regarding the applicability to single domestic wells or exempt withdrawals. Some commenters said that exempt withdrawals should be considered exempt from any obligation to measure their withdrawals. RCW 90.44.050 provides an exemption from the water right permitting process under which certain specified users of less than 5,000 gallons per day may establish a water right to withdraw ground water. Exempt withdrawals nonetheless are regarded as full water rights. RCW 90.44.050 provides, "…to the extent that it is regularly used beneficially, [an exempt withdrawal] shall be entitled to a right equal to that established by a permit issued under the provisions of this chapter." It also authorizes the department to request information regarding the quantity of the withdrawal. Therefore, an exempt withdrawal is not exempt from compliance with water measurement requirements.

Some confusion over the applicability of the rule to exempt withdrawals was probably related to department statements to the press and during the hearings that Ecology currently has no plans to require measurement of exempt withdrawals. Some people interpreted this to mean that the rule does not apply to exempt withdrawals. The department explained that the basis for this statement is that currently the department lacks the resources necessary to enforce measurement on exempt withdrawals, and does not anticipate having sufficient resources to do so in the near future.

To understand why the department does not have sufficient resources, it is necessary to know that the department has dedicated a little over three full time positions to measurement-related compliance work. There are about 222,000 existing water rights (claims, certificates and permits) that are not exempt withdrawals.

Ecology estimates that there are approximately 500,000 to 750,000 exempt withdrawals in the state. Because well drillers have only been obligated to provide well identification information to the department since the 1970s, the department only has information identifying about 250,000 of these withdrawals. Currently, an additional 8,000 exempt withdrawals are being created each year.

A key challenge in enforcing water measurement is actually determining who currently owns the water right authorizing a particular diversion or withdrawal. Water rights are appurtenant to the land they serve: when a water right holder sells his property, the water right transfers with it. During the sale, however, there is no obligation for either the buyer or seller to tell the state that the land has been sold. Consequently, the department's records typically reflect outdated ownership information. The department's records may, for example, indicate that the owner of a water right is someone who has been deceased for a number of decades. In addition, a single water right that served one large parcel of land in the past, may now serve numerous parcels of land because the land was subdivided. Single ownership has become multiple ownership; or,

ownership may have been severed from some of the subdivided lots. To determine current ownership, the department must often individually research each water right and compare it to county land ownership records, a process that typically takes one hour per water right.

Thus, the department recognizes its duty to enforce measurement of all ground water uses that affect surface waters with critical salmon stocks. But, as a practical matter, the department can enforce it only to the extent it has the resources to do so. There are tens of thousands of non-exempt diversions, many of them with more direct impacts on salmon stocks, that are likely to require measurement compliance actions on the part of the department. Simply bringing those tens of thousands of non-exempt withdrawals and diversions into compliance will require years of effort by the department. This is not to say that the department will not require any exempt withdrawals to be measured until all non-exempt diversions are in compliance. But it is to state that the department currently has no plans to enforce measurement of exempt withdrawals in a comprehensive manner. It is possible, however, that the department will enforce measurement on some exempt withdrawals where the department believes it is important to do so immediately.

In the near term, the department's implementation of the measurement statute will be driven by the compliance plan filed with Thurston County Superior Court on March 30, 2001. Under this plan – the purpose of which is to demonstrate substantial compliance with the measurement statute – the department has been ordered to issue compliance orders to those users comprising 80 percent of the water use by volume in sixteen basins where inadequate instream flow is believed to be a contributing factor toward the critical or depressed status of salmonids. More information on the litigation leading to this compliance plan can be found at http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html. In general, it is a small percentage of users, most of whom divert large quantities of water, who collectively use 80 percent of the water in these basins. Thus, it is not necessary to address users who divert small quantities of water, such as exempt withdrawals, to fulfill the compliance plan.

I don't want department employees accessing my property to check my meter.

A number of commenters raised objections to the prospect of department personnel accessing their private property to assess or enforce compliance with the measurement statute. It is department policy that if a landowner refuses to grant access to the department's employees, then the employee will not access the property. If the landowner refuses to grant access, and the department still desires access, then the department may seek a legal warrant.

I don't feel I should have to measure my water use.

The requirement to measure one's diversion or withdrawal derives from statute, not regulations. In other words, the Legislature has required it as a matter of state law. The department is responsible for administering the law and adopting regulations that are necessary to do so. The proposed rule will repeal and replace the existing rule (Chapter 508-64 WAC) that establishes requirements regarding the acceptability of measuring devices. The requirement to measure water use has existed for years and the department was successfully sued for not enforcing it. The department has been ordered by Thurston County Superior Court to promulgate a revised

rule by December 31, 2001. Failure to do so could leave the department vulnerable to contempt of court charges.

I can't afford to measure my water use.

In enacting the measurement statute, the Legislature has concluded that the costs of measurement are exceeded by the benefits of water measurement. If you divert public waters, you have a duty to measure and regulate your use.

The actual cost of installing a meter will depend on your specific situation and the quantity of your diversion. You may be able to use indirect methods (e.g., power consumption or timing your withdrawals) of measuring your water use, thereby avoiding the costs associated with installing a meter or open channel measurement system. Finally, in 2001 the Legislature appropriated $3.4 million toward the funding of measuring devices and gauging. The department is developing criteria for making that money available to defer the costs of purchasing and installing a measuring device. Ecology cannot say whether the Legislature will choose to continue to appropriate monies toward measuring devices in the future.

Water measurement will lead to a water tax or fees on water use.

A number of commenters expressed concern that water metering will lead to fees on water use. Metering typically is used by water and electric utilities, and irrigation districts, to charge their customers for the quantity of water used (in some cases, flat-rate billing may exist). For the state to act similarly would require legislative authority. Currently, only owners of water rights for power production purposes are required to pay a fee to the state for the amount of water they claim (RCW 90.16.060).

The Department of Ecology will use water measurement to "take away" water rights.

A number of commenters expressed concern that water measurement data will be used by the department to force users to relinquish the right to water that is not used. Under state water law, the measure of a water right is beneficial use, i.e., there is no right to water that is not beneficially used, even if there is a "paper" right to a larger quantity of water. The standards for relinquishment are set in statutory law. Water measurement does not, by itself, alter these standards. However, it does provide a more accurate means of quantifying historic use. Depending on actual historic use, an individual's claim or right to a specific water quantity could either be strengthened or weakened. Other factors need to be taken into consideration as well, such as whether sufficient cause exists for the nonuse of water (RCW 90.14.140). In addition, water users of certain types and under certain conditions are exempted from the relinquishment provisions of the law.

Comments and Responses

This section contains the comments received and the department's responses to those comments. The comments have been quoted near-verbatim. The department omitted statements where the commenter stated their address. Copies of the original comments are on file and available from the department.

COMMENTER

Bill Wiggins, United States Geological Survey

COMMENT
A clear understanding of terminology and measurement requirements is certainly needed. However, there is confusing application and reference to the terms "volume" and "rate" throughout the document. For example replacing "volume" in WAC 173-173-020 (b) with the term "flow rate" would make the statement correct, that is "The flow rate of the surface water diversion exceeds one cubic feet per second".

RESPONSE
Ecology agrees that flow rate would be a more technically accurate statement for use in WAC 173-173-020(b); our use of "volume" in this subsection was to conform to the language contained in the statute. It is clear, however, from the statute's reference to "cubic feet per second" that "flow rate" would be an acceptable use of terminology.

COMMENT
Additionally, the terms "rate" and "volume" are not interchangeable as implied in WAC 173-173-050 (2e). The term "flow rate" is correctly defined in the definition section as a volume of water per unit time. Under the definitions Ecology suggests that "flow rate" include the terms "cubic feet per second, gallons per minute, and acre-feet per year" and that volume be defined in terms of "cubic feet, gallons, and acre-feet" to define the distinction. The terminology should be changed in several other points in the document.

RESPONSE
We have added language incorporating your suggestion.

COMMENT
WAC 173-173-060 requires the reporting of maximum instantaneous discharges although recording frequencies only range from daily to monthly. Instantaneous maximum discharges cannot be adequately determined using such infrequent recording intervals (is the instantaneous maximum discharge recording and reporting requirement even needed for low withdrawals, say <10 gpm). Perhaps recording frequency actually refers to the time increments for which data will be reported, not the actual meter instrument measurement and recording interval. This section is confusing and should be clarified.

RESPONSE
We have revised this section to clarify the frequencies of recording and reporting and the meaning of maximum instantaneous discharges

COMMENT
Also under WAC 173-173-080 -- modifying reporting requirements: We feel there should be some additional allowances to allow non-reporting when it is redundant to other measuring systems. For example, say a primary diversion on a river is metered at the primary diversion point and several secondary diversions off the primary diversion are metered at the secondary diversion points. Is it still required to measure the secondary diversions? An additional statement regarding redundant measuring situations would be appropriate.

RESPONSE
It is the intent of the regulation to only apply to primary diversions (e.g., source meters, headgates, etc). We have added language to the applicability section of the rule (WAC 173-173-040) to make this clear.

COMMENT
Under WAC 173-173-100 -requirements for pressure systems: Please note that most Totalizing Meters that are commonly used in ground water withdrawal systems are incapable of recording maximum rates. However, average rates could be calculated by the recording of the periodic total readings.

RESPONSE
We recognize the limitations of totalizing meters with respect to the recording of instantaneous discharge. It is, possible, as you note, to achieve a reasonably accurate estimate of instantaneous discharge for systems that discharge at a near-constant rate if one measures total discharge over a defined period of time, and then calculate the average rate. For example, a meter that displayed a total volume of discharge of 590 gallons over two minutes would have an instantaneous rate of discharge of 295 gallons per minute. The final rule address this option at WAC 173-173-060.

COMMENT
Under WAC 173-173-170 -What alternative water measuring devices and methods can I use: Although it may be technically preferable it will be a very difficult requirement for water users to obtain private certified engineer assistance in many instances because of cost. Is there an alternative solution? Could engineers be funded by the State to support this effort?

RESPONSE
We agree that it may be difficult for all users to obtain the service of a certified professional engineer. We have added a provision allowing for "or other person acceptable to the department" to this subsection. The department will continue to reserve the right to reject alternative methods that do not meet the requirements otherwise specified in WAC 173-173-170.

COMMENT
A major concern in our view is implementation of the proposed rule. Many water users are unprepared in training nor do they have funds to measure flows. Only with a very strong outreach and support program at the State field level will this program be implemented successfully

RESPONSE
We agree that successful implementation of the rule will require public outreach and education efforts, e.g., training workshops, technical guidance documents, presentations, etc. The Legislature also has appropriated funds for the installation of metering and gauging devices to offset the cost of coming into compliance with the measurement statute.

COMMENTER

Denise Smith, League of Women Voters of Washington

COMMENT
The League of Women Voters has followed the evolution of water policy in Washington for over thirty years. From the development of the Water Resource Act to the more recent Municipal Water workgroup, League members have been involved in the water resource planning process. We are familiar with the current issues and the past failures to update water policy. The League has several longstanding positions on water: From the 1980 Columbia River task force: The League of Women Voters of Washington believe that in order to meet present and future water needs within the Columbia River basin (which as we have heard today represents more than 70% of the state), comprehensive basin-wide planning must occur for optimum utilization, conservation, development and management of water resources. The Leagues of Women Voters of Idaho, Oregon, and Washington believe that wise-planning for the use of water in the Columbia River basin requires an inventory of the basin water resources. This inventory should include water related information such as ground and surface water sources, viable water rights, current use and projected future needs. Minimum stream flows should be established as a public right and maintained on all streams in the Columbia River Basin. From several more recent studies the 1979 and 1991 position: The League of Women Voters of Washington support strict enforcement of laws affecting water quality and quantity management in Washington State.

RESPONSE
Thank you for your comment.

COMMENT
Water is a precious and limited public resource in our state. We are no longer an untamed wilderness. Just as we have had to manage other public resources such as timber, fish, wildlife and minerals we must manage the state's water. It is inconceivable that realistic management for instream flow, growing communities, relinquishment or storage could occur without a clear understanding of the impact of the 500,000 to 750,000 exempt wells across the state let alone

stock water use. We understand the controversial nature of this issue. We also understand the difficulty overseeing such a program. We urge you, at the least, to consider mechanisms for measuring the impact of this wild card in water management through requiring metering of this use of the public's resource.

RESPONSE
Thank you for your comment.

COMMENTER

Judy Larson

COMMENT
173-173 language needs revision to more narrowly define/clarify its applicability to more closely match intent of 90.03.005, which specifies economic feasibility, and appropriate analysis of benefits & costs.

RESPONSE
The authority for this rule derives from RCW 90.03.360, Chapter 90.44.RCW, sections 050, 250, 450. RCW 90.03.005, the statute cited by you, declares state policy against wasteful water use and the efficient use of state waters. An analysis of economic benefits and costs associated with this rule proposal has been performed pursuant to RCW 34.05.328(1)(c), which requires that, prior to the adoption of certain rules, a determination be made that "…the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the statute being implemented." An analysis concluding that the benefits are greater than the cost is on file at the Department of Ecology.

COMMENT
The SEPA review determination of DNS has checklist items revealing potential impacts at implementation regarding concrete/earthworks for diversions and electric energy usage for meters, permits that would be needed for installations and possible contamination of pipes in well metering installations.

RESPONSE
The SEPA review of the rule noted that, while the rule itself does not cause direct environmental impacts, individuals coming into compliance with the rule could be required to undertake activities which themselves would cause environmental impacts, e.g., some minor excavation to install a weir in a ditch. Permits that are required for such activities would likely be subject to conditions necessary to mitigate or avoid environmental impacts

COMMENT
The Regulatory Fairness Act Compliance Document is written in terms that do not readily reveal outright costs to be expected and possible disproportionate impacts on small businesses. No analysis has been provided in these reviews or the explanatory materials found on the website that would let individual users know or deal with potential costs for metering.

RESPONSE
The purpose of the Regulatory Fairness Act Compliance Document is to evaluate the proposed rule for disproportionate impacts on small versus large business. If disproportionate impacts exist, the Act requires that mitigation be provided to the extent feasible and legal under the statute being implemented. The analysis conducted for this proposal indicates that, although estimated compliance costs are borne disproportionately by small businesses, the costs imposed on both small and large businesses are minor. This analysis does not purport to address the economic impacts on individual users. Information used to analyze the costs of measurement devices is on file with the Department of Ecology. In general, the cost of a device could vary from several hundred dollars for small diversions to many thousands of dollars for large diversions.

COMMENT
The 80% usage analysis should be used for each affected WRIA to determine when metering is really meaningful for the analysis of water resources. IF review of 90.03, 90.44 and the "to be replaced 508-64" can still support the cost/benefit of having individual single-dwelling units using domestic wells or having shares in an ACTUAL DIVERTING IRRIGATION COMPANY comply with the improved measuring standard, then rule 173-173 MUST be rewritten to allow for alternative methods for measurement (173-173-170) and for alternative recording/reporting requirements (173-173-060,-070,-080). WITHOUT SUCH APPROPRIATE, SIGNIFICANT REVISIONS, EVEN THOSE OF US WHO SUPPORT THE IMPROVEMENT OF WATER RESOURCE DATA AND USAGE WILL FIND THIS RULE ONEROUS AND SOMETHING THAT SHOULD BE CHALLENGED.

RESPONSE
Ecology lacks the authority to exempt single user domestic wells from compliance with statutory law. Ecology is under court order to promulgate a revised rule amending or replacing Chapter 508-64 WAC. Ecology also is under court order to require the measurement of ground water use that may affect surface waters containing critical or depressed salmon stocks. As you suggest, Ecology has sought to draft the rule to provide flexibility to water right owners in meeting their obligation to measure water use. Indeed, the sections you cite contain just such flexibility. The final rule includes revised language that authorizes the department to grant a variance from the technical and reporting requirements contained in the rule.

COMMENT
Examples of improvement would be to let small users report only during critical irrigation months of July, August, September, since WRIA 18 irrigating dates are typically 4/15- 9/15 yearly using their pumping rate and hours pumped as measures.

RESPONSE
The rule requires that reporting of water use be annually, regardless of the quantity diverted. It does, however, establish different frequencies for recording the amount diverted or withdrawn.

COMMENT
The typical domestic well-water users should be allowed to provide calculated usage, based on household usage measured perhaps by counting the number of times the household pressure tank is filled in some average daily usage window.

RESPONSE
We are unaware of a commercially available system that can record the number of times a household pressure tank is filled on a daily basis. Also, household pressure tanks generally are not full; we are unaware of household pressure tanks that allow measurement of volume for partially full tanks.

COMMENTER

Brad Lake, City of Kent

COMMENT
Kent currently has 16 wells (sources) that will be impacted by this rule if enacted. We have a obligation to our citizens to provide safe, reliable drinking water at a affordable price. The City of Kent will incur significant costs, as well as expend manpower that could be put to more beneficial use elsewhere, if this draft rule is enacted as it is worded.

WAC 173-173-060 states that under this section, readings would have to be taken daily for recording purposes. The City currently has people staffed Monday though Friday with no one working the weekends except to be on standby, monitor alarms, and run the treatment plant when in use (seasonal). Daily readings would require more manpower for weekend readings or upgraded metering and telemetry capable of seven-day readings. Both of these would require costs and time for all of our sources.

RESPONSE
The language requiring daily monitoring as a default requirement has been removed because of numerous comments that this frequency was too onerous for most users greater than 200 gpm. Ecology may on a case-by-case basis require daily monitoring if it believes that that frequency is needed for a particular situation. There is also language in the rule that allows water users to request that Ecology waive or modify a requirement. If reasonable justification is provided, Ecology grant a variance from the technical and reporting requirements in the rule.

COMMENT
WAC 173-173-090 (6) states there shall be no turnouts or diversions between the source of water and the measuring devices and facilities. The City of Kent has 16 wells, 14 of which have to pump to waste lines that the wells pump through when first started. They pump for approximately 30-60 seconds before shutting off and the water redirected into the distribution system. There would be significant costs as high as one million dollars, as well as the manpower expended designing and constructing new meters, piping telemetry, and other appurtenances that would be needed to meet this section of the proposed WAC. Building and vault sizing may have to be changed in order to include more piping and appurtenances required for accurate flows through the meters. Our reasoning is why waste money and time when all we would be metering is approximently .01% of our total water production. We could be expending our resources on other useful water related projects.

WAC 173-173-090 (8) states that in the case of Artesian wells, the meter will have to be installed in a manner that will measure both pumped and flowing discharge. Kent has five Artesian wells with relief piping that allows us to work on the well pump or motor in high aquifier conditions. All five relief-piping assemblies are not metered and are only used in emergency or critical maintenance or repair conditions. Potential for this happening is only once per source every 3-5 years for maybe an eight-hour period on average. Building and vault sizing may have to be changed in order to include more piping and appurenances required for accurate flows through the meters. Again, this is a waste of money and manpower for an extremely small amount of water.

WAC 173-173-110 (2) states there shall be a full pipe of water at all times when water is being withdrawn. Again, as in Kent's comments (2) and (3), our waste and Artesian pressure relief piping would have to be modified if we are required to put meters on those lines. Building and vault sizing may have to be changed in order to include more piping and appurtenances required for accurate flows through the meters

RESPONSE
Language allowing reasonable and de minimus turnouts will be in the rule.

COMMENT
WAC 173-173-100 (4) states that the meter totalizer shall contain sufficient recording digits to ensure that "Roll Over" to zero doen not occure within a one year period. Currently some of Kent's water source meters would have to be replaced to meet the conditions of this section of the proposed WAC. There is no resonable reason to spend time and money replacing our existing large meters that are registering accurately.

RESPONSE
Several commenters had this concern. Language has been changed to state that rollover shall not occur prior to the next recording time. In the case of the City of Kent, that would be one to three days (over a weekend) that the totalizer would have to count.

COMMENTER

Sean Russell

COMMENT
The requirements under Chapter 508-64 WAC have become outmoded as our state has grown and demanded the use of more water. Chapter 173-173 WAC proposes to adopt new metering requirements. When opportunities for improvement present themselves, it is crucial that they are used in the most effective manner. The current proposal provides an excellent framework for making the necessary changes that our environment currently requires.

The technology for measuring devices and methods has progressed and the proposed rule adequately establishes new standards of acceptability. However, the requirement of current measuring techniques provides for only half of the equation to complete water accountability; reporting and recording of water use data is also a necessary part to the program.

Understanding that agency funds are limited, it is especially important that new proposals avoid leaving loopholes, which could result in a waste in the appropriated funding, as well as having a devastating effect on the overall purpose of the rule. The current proposal has such a loophole. 173-173-050 WAC proposes that Ecology *may* require a party to report water use data. This proposed rule falls short by not *requiring* water users to report measurements to Ecology.

Private use of the public's water supply is a privilege. However, this privilege sometimes gets overlooked. Mandatory recording and reporting is the first and most basic step in making rational choices about whether and where to issue water rights. Requiring water users to report their use would not only be beneficial to Ecology in managing water use, but would also promote accountability for water users. Without such a requirement, Ecology is going to be trying to "balance the checkbook" without knowing what was spent. Without correct data, Ecology is essentially playing a guessing game when it issues new permits. Losing the game will result in both economical and ecological devastation for our region.

The longer we continue with the current reporting requirements, the longer it will take to gain a more complete and accurate picture of where Washington's water is going. Requiring users to report their use needs to be implemented as soon as possible. Although a data management system may be arduous task for Ecology, watershed planning groups, environmental organizations. Indian tribes, and citizen activists can start using the information immediately.

Metering water will provide water users with information so that they may operate more efficiently. Further, it will protect the compliant users from being placed at an economic disadvantage to the non-compliant users. The Washington State Legislature has directed Ecology, under RCW 90.03.360, to meter new surface water use throughout the state. Under RCW 90.44.050. RCW 90.44.250, and RCW 90.44.450, Ecology has been granted broad authority to require measurement of ground water withdrawal. This broad authority should be seen as an opportunity to establish lasting regulations, which will help to protect our

environment and economy in the years to come.

Ecology is at a crossroads. Now is the time for to help the state of Washington prepare for our future by promoting the most efficient use of our state's waters. By establishing a complete body of regulations regarding the measurement of water use, Ecology will help to provide a piece of the framework that is necessary for the hydro-sustainability that our environment requires.

RESPONSE
We agree that reporting of water use is important. While the rule provides that Ecology may exercise its discretion whether to require reporting of water use, as do the statutes authorizing the rule, we anticipate that, in practice, Ecology will require reporting in nearly every case where it enforces measurement. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002.

COMMENTER

Jay Gordon, Washington State Dairy Federation

COMMENT
Section 173-173-060 1. Grants authority to require meters on very small wells, we believe that wells exempted by RCW 90.44.050 should also be exempted from the provisions of the rule. If there is no water right permit there cannot be permitting requirements, and these wells should be exempted from the metering requirements of permit holders.

RESPONSE - RCW 90.44.050 provides an exemption from the water right permitting process under which certain specified users of less than 5,000 gallons per day may establish a water right to withdraw ground water. Exempt withdrawals nonetheless are regarded as full water rights. RCW 90.44.050 provides, "….to the extent that it is regularly used beneficially, [an exempt withdrawal] shall be entitled to a right equal to that established by a permit issued under the provisions of this chapter." Therefore, an exempt withdrawal is not exempt from compliance with water measurement requirements.

COMMENT
There have been statements made at the hearings that the Department of Ecology has no intention of requiring measuring or reporting requirements of these "exempted" wells. We would like to see that language specifically stated in the WAC, if at some point in time the department finds it necessary to implement a small well monitoring program, those rules should go through the rule-making process.

RESPONSE
Because the Department currently lacks the resources to enforce measurement of exempt withdrawals, Ecology currently has no plans to do so. As a legal matter,

however, the Department lacks the authority to exempt this class of users from the statutory duty to measure water use if those withdrawals may affect salmonid stocks listed as critical or depressed. However, where ground water use is not believed to affect these stocks, it is discretionary for Ecology to enforce the measurement of that use (See RCW 90.44.050). While we do not believe that an additional rule would need to be adopted to enforce these provisions, we do agree that it would be appropriate to consult with the public if the department ever decided to enforce the measurement of exempt withdrawals in a systematic, comprehensive manner.

COMMENT
Section (2) states the level of recording and reporting that is required for various flows. We believe that weekly reporting of flow under 200 gpm is not warranted when the reporting is only required annually. For most farmers there is no use in the winter for irrigation, we suggest a schedule of annually (<10 gpm), quarterly (10-50 gpm) and monthly (>50-200 gpm). This should generate sufficient quality data while not imposing unnecessary paperwork

RESPONSE
There is no requirement in the rule for weekly reporting. All reporting, regardless of quantity, is to be done on an annual basis. There is a requirement for weekly recording (i.e., the frequency at which the diversion measurements are recorded) of water use for water users that divert 10 to 200 gallons per minute. Section 173-173-070 of the proposed rule provides discretion for the department to approve a different reporting format upon the request of a water user. In the final version, this language has been removed and replaced with a general variance clause.

COMMENT
We suggest that the cost/benefit ratio to monitor a flow of 10 gpm is likely very poor and only extreme cases should ever be considered when requiring a permit holder to comply with these provisions. We would like to see some language that would explain when these provisions would be imposed on such minor withdrawals.

RESPONSE
Whether the benefits of monitoring a flow of 10 gallons per minute exceed the costs is a question that, in certain circumstances, the Legislature has already answered in the affirmative. The Legislature, in enacting the measurement statute, has determined that water measurement is in the public interest. For water diversions that may affect critical or depressed salmon stocks, Ecology is required by statute to enforce the measurement of those diversions regardless of the quantity of water diverted. Ecology also is required by statute to enforce measurement of all new surface water rights it issues regardless of quantity. Ecology additionally must enforce measurement on those rights that exceed 1 cfs even if they do not affect critical or depressed stocks of salmonids. Ecology does, however, retain the discretion whether to enforce the measurement of existing uses that do not affect critical or depressed salmonids and are below 1 cfs in size.

COMMENTER

James Schumacher

COMMENT
I wish to thank you for allowing me to respond to your "Water Use Measurement Draft Rule". I must also comment on your conditions for comment. I realize that in the state of Boeing and Microsoft, you may find it hard to believe some people may not be able to comment on any of ecology's draft rules. Many people are unable to drive great distances to attend Public Hearings, the nearest one to me was four hours away. Also, not everyone has access to the internet to make on-line comments. Whatever is wrong with the mail? I believe you may be trying to decrease the number of people who would like to comment on your draft rules

RESPONSE
We are sorry the locations of our public hearings were not convenient for you. We held hearings in six different locations: Tacoma, Walla Walla, Yakima, Wenatchee, Bellingham and Sequim. We also are sorry you understood that we would only accept comments via Ecology's comment form on the measurement website. This is incorrect. Ecology also accepted comments via standard mail, e-mail and facsimile.

COMMENT
I wish to begin by stating my opposition to this draft rule. While I do agree with the portion dealing with RCW 90.03.360, I strongly disagree with any part of WAC amendments having to do with compliance to the ruling from the Superior Court of Thurston County.

The separation of powers so carefully laid out by our country's founding fathers gave us three branches of government. Both the ruling by the Thurston County Superior Court and the subsequent WAC rewriting by Ecology are against our constitution (state and federal). It is the responsibility of the legislative branch to write the laws, the judicial branch to rule on the law, and the executive branch to apply the law. In the case of your water use measurement draft rule, it appears as if both the court and your agency are trying to legislate. I for one believe you are trying to set a dangerous precedent. When the Department of Ecology attempted to do this very thing with their shoreline rules, it was overturned by the hearings board. Now with the latest ruling from a U.S. Circuit Court judge removing the protected status of Salmon from the Endangered Species List, I see absolutely no reason to support any measurement of water use other than compliance with RCW 90.03.360.

In conclusion, I oppose all of your draft rules. Send this back to the State legislators and allow them to do their job. Do not attempt to overstep your authority.

RESPONSE
We believe the Legislature has specifically granted Ecology the authority to adopt regulations determining how it will implement that which the Legislature has

required it to do via statute. Administrative rule-making is authorized and governed by the Administrative Procedures Act (Chapter 34.05 RCW). This rule is intended to implement RCW 90.03.360, Chapter 90.44 RCW, sections 050, 250 and 450. In addition, Ecology has been directed by Thurston County Superior Court to promulgate a revised rule. Anyone who believes Ecology has exceeded its authority may appeal the adoption of this rule pursuant to the Administrative Procedures Act.

COMMENTER

Tom McDonald, Perkins Coie LLP, representing Okanogan County

COMMENT
The County has the following comments on specific sections. WAC 173-173-020. This section states the authority under which the rule is being promulgated. In subsection (2)(a), it appears ground water withdrawals will have to be metered if the withdrawals are from waters in which the salmonid stock status is depressed or critical. In American Rivers, et al. v. Ecology, the Court ruled that RCW 90.03.360 does apply to existing ground water rights where salmonid stocks are depressed or critical if the Department of Ecology "has a basis for believing the ground water right may affect surface water supporting depressed or critical salmonid stocks." The language in the proposed rule does not clarify that there must be a finding that the ground water rights will affect the surface waters supporting the salmonid stocks. The burden will be on the State to make this determination. The rule should clarify that only ground water withdrawals in which Ecology has determined that the ground water source affects the surface water source are subject to metering requirements of RCW 90.03.360.

RESPONSE
We have added language to this section intended to clarify that a determination that a ground water use "may affect" a critical or depressed salmon species is required before Ecology is required to enforce measurement. There need not be a determination that the ground water use "will" affect such species.

COMMENT
WAC 173-173-030. This section provides the definitions that are used throughout the rule. In subsection (13) "Responsible Party", the proposed rule creates responsibility and liability on people that may not be the owners of the water rights. The only parties responsible for metering under the surface and ground water codes are the owners of the diversions. RCW 90.03.360 applies to "owner or owners of any water diversion" and "every owner or manager of a reservoir for the storage of water". RCW 90.44.250 applies to the "ground water appropriator". By defining "responsible party" much broader than just the owner of the measuring device or the owner or manager of a reservoir, the rule may result in having a person liable under the rule who would not otherwise be liable under the statute. The definition of "responsible party" should be

limited to only those persons, owners or managers, who would be liable under RCW 90.03.360, RCW 90.44.250, and RCW 90.44.450.

The definition of "responsible party" also includes the owners of exempt wells authorized under RCW 90.44.050 only requires that a person or agency making the withdrawal to "furnish information as to the means for and quantity of that withdrawal." There is no requirement under RCW 90.44.050 to actually meter the water use. I therefore suggest that the reference to RCW 90.44.050 be stricken.

RESPONSE
We have revised the definition for "responsible party" so that it more clearly corresponds to the underlying statutes. However, we disagree that under RCW 90.44.050 an owner of an exempt well could not be considered a responsible party. RCW 90.44.050 provides that, " the department from time to time may require the person or agency making any such small withdrawal to furnish information as to the means for and the quantity of that withdrawal." To determine the quantity of a withdrawal, it is necessary to measure it using direct or indirect measurement methods.

COMMENT
WAC 173-173-050. This section describes the type of detailed information that the Department may require from any responsible party. The information is quite extensive and appears to go beyond what the statute otherwise requires. RCW 90.03.360 requires measuring devices to permit "accurate measurement and practical regulation of the flow of water diverted." The statute further states that the Department may require "reports regarding such meter diversions as to the amount of water being diverted." RCW 90.44.250 also states that the reports are for the "amount of public ground water being withdrawn and as to the manner and extent of the beneficial use." RCW 90.44.450 states that the Department may require "reports regarding such withdrawals as to the amount of water being withdrawn." The language of the statute therefore appears to limit the purpose of reporting to the amount of water being diverted or withdrawn and not to the additional information that could be requested by the Department under this section. Subsections (2)(c), (k), and (m) clearly go beyond the language and purpose of the statute. Further, this proposed section places a requirement on the "responsible party" to notify the Department of a change of address or a change in ownership of the water rights. The metering statutes do not require such information and although it may be good business practice to notify the Department of a change in ownership of the water rights, there is no statutory law requiring the owner to report. Therefore it should be stricken from the rule.

RESPONSE
We agree that the range of information proposed to be requested pursuant to Chapter 173-173-050 WAC is broader than simply the quantity of water diverted or withdrawn. Information regarding the quantity of water withdrawn, however, will be of little use if we also do not know the location of the diversion or withdrawal or are incapable of identifying it. Subsection 2(c) is necessary to identify the location of the diversion. Subsection 2(k) is for the purpose of determining whether a fish screen is associated with the diversion or withdrawal

facilities. The purpose of this section is to enable the department to comply with the requirement of RCW 90.03.360(2), which requires Ecology to "notify the department of fish and wildlife of the status of fish screens associated with these diversions." Finally, Section 2(m) requires diversions and withdrawals for public water supply systems to supply a public water system identification number. The purpose of this information is to enable Ecology to better integrate data management efforts with the Department of Health, which also periodically requests water use information from public water supply systems pursuant to Chapter 246-290 WAC. We have deleted the subsection that required responsible parties to notify the department of changes in ownership or address.

COMMENT
WAC 173-173-080. This section also provides the Department with the authority to use the reporting requirements to obtain more information than simply the quantity of water being diverted or withdrawn. The rule includes reporting information that may be necessary to "implement the recommendation of a watershed planning group." There is nothing in the law that would forbid the Department from using the information reported on the quantity of water diverted or withdrawn for other purposes and activities including watershed planning. However, it is beyond the Department's authority to use the metering statutes to require additional information that the State may want for watershed planning or other purposes. This entire section should be stricken.

RESPONSE
RCW 90.03.360 provides the department "may require…reports regarding…metered diversions as to the amount of water being diverted." The department has written reporting and recording requirements that uniformly apply to all users in WAC 173-173-060. We believe it is important that those who will be asked to comply with this rule know what is expected of them when they are required to record and report their water use. For data management reasons, we also believe it is important to have a consistent data protocol in terms of measurement units, and reporting and recording frequencies. At the same time, however, we recognize the reporting and recording frequencies provided for in subsection 060 may not be appropriate for all situations. Thus, we have provided language allowing Ecology to request information according to a different recording and reporting schedule if it is necessary for those reasons identified in WAC 173-173-080. The provision to modify reporting to support watershed planning is appropriate, especially given the authority in RCW 90.82.070 (d). In this statute, the Legislature directed that watershed planning provide, "An estimate of the surface and ground water actually being used in the management area."

COMMENT
WAC 173-173-090. This section describes the requirements for the measuring devices. In subsection (9), it is stated that the employees of the Department shall have access to the measuring devices and facilities upon reasonable notice to the property owner. The Department cannot by rule create the right to enter on anybody's land. It is clear in state law that the

Department may be liable for trespass if it enters onto a property owner's land without first obtaining permission or a warrant. This subsection should be stricken.

RESPONSE
We have deleted this subsection. Please see the discussion regarding access to private property on page 22.

COMMENT
This section discusses "rating curves" and the requirement to have those recalculated if necessary. It is not clear how rating curves relate to the requirement to have the diversion or withdrawal of water metered. To the extent that this section, as well as any other sections, requires anything more than just metering and measuring of the withdrawal of water, this section goes beyond the authority under statute and should be stricken.

RESPONSE
We disagree. RCW 90.03.360 does not only authorize "metering" but also "measurement by other approved methods." Thus, the Legislature has authorized the department to require types of measurement that do not rely on a physical meter. To measure open channel flow, it often is necessary to develop a rating curve depicting the flow-stage relationship to determine the flow rate for a particular water elevation. Stage height by itself does not provide enough information, absent a rating curve, to indicate flow rate.

COMMENT
WAC 173-173-180. This section discusses the record-keeping responsibilities of the owner of the water right. It states that all notes, rating curves, calculations, and data logs must be retained and made available to the Department upon request. This statute only requires that the owner or appropriator provide a report as to the amount of water being withdrawn. A rule cannot place additional responsibilities on these owners and expose them to a violation of the law if in fact they for any reason lose or cannot produce all their notes, calculations, and logs. We suggest the Department strike the language and if it believes necessary only request that all reports be submitted with supporting notes, calculations and logs.

RESPONSE
We have revised this section to stipulate that owners "should" maintain such records "as long as practicable."

COMMENTER

Ian Jablonski, City of Port Townsend

COMMENT
The proposed rule requires that the volume of water withdrawn be measured from 12:01 a.m. to 12:00 p.m. The City's diversions are located in the Olympic National Forest, an area without electric power, and operators work an 8-hour day monitoring the pipeline. Meters readings are

currently recorded daily at the same time of the day, but during working hours. Without the availability of electric power to operate a recording logger, we believe that the midnight monitoring requirement should be adjusted to accommodate for working hours. The remote location of many meters and unreliability of electric service, where available, would also result in the more frequent loss of data than would a mechanically recording meter

RESPONSE
We think you have misunderstood the definition for daily measurement. The rule defines a daily period as one extending from 12:01 a.m. to 12:00 p.m. It does not require the user to visually record instantaneous flow at all moments during the day or each day beginning at 12:01 a.m. It does require that the meter be recording flow whenever water is being diverted, however, and that when daily flow is reported, it be reported for the period of 12:01 a.m. to 12:00 p.m. If the diversion is unmanned, we assume that the diversion rate is constant. If you know the diversion rate is constant, it would be sufficient to assume a constant rate of flow during those times that the meter is not actually read and then calculate the volume withdrawn over the period of time the diversion rate has been constant.

COMMENT
The proposed rule requires measuring maximum instantaneous diversions. Measuring this is not practical without electrically powered recorders. The remote location of many meters and unavailability of electric service limits the types of meters that can be used.

RESPONSE
We would recommend that you measure the flow at a time when your diversion intake is set to a maximum position and then calculate the instantaneous volume of flow by determining the total volume diverted over a few minutes (e.g. gallons per minute) using a totalizer meter and a stop watch.

COMMENT
The proposed rule requires a totalizer that shall contain sufficient digits to ensure roll over to zero does not occur within one year. With daily readings this requirement is not necessary to achieve an accurate record of withdrawals. By factoring in the previous day's reading from the roll over total and the current day's numbers the 24-hour reading captures the total withdrawal at the rollover point. Many meter heads would have to be replaced for no added benefit

RESPONSE:
We agree. We have revised the reporting section to merely require there are sufficient digits to account for the applicable recording period. For example, if recording is supposed to be monthly, then there should be enough digits to assure that the meter does not rollover sooner than a month.

COMMENTER

Justin Yeager, Northwest Adventures, Inc.

COMMENT
I fully support this new rule. I believe that it is imperative that we understand the amount of water that is used and where it is being used. This will allow us to better allocate and/or use the water that is available while also improving instream flows for fish and recreation, as well as providing a building block to improve efficiency and compliance of water use.

RESPONSE
Thank you for your comment.

COMMENTER

Ajay Ramachandran

COMMENT
Hello, Firstly I really appreciate the opportunity to comment on the new water use proposals. I would like to make the following comments: 1) Metering provides the users with the information necessary for their compliance with the permits and to implement more energy efficient strategies. Metering will ensure that those who comply are not put to an economic disadvantage as opposed to others who do not.

RESPONSE
Thank you for your comment.

COMMENT
Given that the economic benefits the holders derive from their free use of the public's water supply is significant, it is very reasonable to ask that they account for how much they are using.

RESPONSE
Thank you for your comment.

COMMENT
Metering water use is essential to implementing water conservation, regulating unauthorized use, managing increasingly scarce resource and restoring instream flows.

RESPONSE
Thank you for your comment.

COMMENT
While I do support the new proposed metering rule, I would like [to] suggest that reporting begin immediately and by requiring that ground water use also be metered throughout the state.

RESPONSE
We agree that reporting of water use is important. While the rule provides that Ecology may exercise its discretion whether to require reporting of water use, as do the statutes authorizing the rule, we anticipate that, in practice, Ecology will require reporting in nearly every case where it enforces measurement. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002.

The Legislature has provided Ecology the discretion whether to enforce ground water use measurement in areas which do not affect critical or depressed salmon stocks. We have decided to retain that discretion in the rule.

COMMENT
Water usage reporting should start right away. This is vital as it will enable the careful monitoring of trends and help resource managers to arrive at better decisions and identify the excessive users easily. Further other groups outside of Ecology can use this information right away.

RESPONSE
See Response to previous comment.

COMMENT
Since the legislature has given Ecology the authority to require metering of ground water use, Ecology should use this authority to protect fish and wildlife and also law-abiding people who use water in compliance with their permits.

RESPONSE
The Legislature has provided Ecology the discretion whether to enforce ground water use measurement in areas that do not affect critical or depressed salmon stocks. We have decided to retain that discretion in the rule.

COMMENT
The Yakima River basin irrigators long ago endorsed universal water metering. These users endorse the benefits - especially those who follow the law. It is vital that we do this to curtail illegal water use.

RESPONSE
Thank you for your comment.

COMMENTERS

Les and Lorraine Kile, T and S Cattle Ranches

COMMENT
Your proposed rules and regulations appear to target the largest and biggest water users (large irrigation companies, etc.) Hopefully your rules will continue to target only the largest water users. Those of us with smaller farms and just a minor amount of water cannot afford to purchase water meter devices (I heard a cost of $5,000 mentioned sometime in the past) At the present time, just paying the cost of irrigation pumps, well drilling, and electricity of run the pumps is a very, very marginal expense (especially in growing alfalfa). If I had any additional major expenses added to my expensive property taxes and land use restrictions (growth management, etc.) I would be unable to farm. Please, no more impossible regulations!!!!!!!!!

Small farmers are already on the edge of bankruptcy. We don't need the Dept of Ecology to push us over.

RESPONSE
The proposed rule applies to all water users, not merely the "largest and biggest." Your comment may instead be directed to the court-ordered compliance plan, under which Ecology is required to bring those users comprising 80 percent of the water use in certain salmon-critical basins into compliance with the measurement statute (RCW 90.03.360). Under this compliance plan, Ecology is required to issue orders to all of those users by the end of 2002.

The actual cost of installing a meter will depend on your specific situation and the quantity of your diversion. It also is possible that you may be able to use indirect methods (e.g., power consumption or timing your withdrawals) of measuring your water use, thereby avoiding the costs associated with installing a meter or open channel measurement system.

COMMENTER

Tim Coleman, Kettle Range Conservation Group

COMMENT
The over 800 members and their families of the Kettle Range Conservation Group support the proposed rule. We ask that the rule be strengthened in these two areas:

1. Require water users to report measurements to the Department of Ecology. This information should be compiled, assessed and made available to Ecology and the public.

RESPONSE
We agree that reporting of water use is important. While the rule provides that Ecology may exercise its discretion whether to require reporting of water use, as do the statutes authorizing the rule, we anticipate that, in practice, Ecology will require reporting in nearly every case where it enforces measurement. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002. Water use information that is submitted to Ecology will be considered public information and subject to public disclosure.

COMMENT
2. While the proposed rule requires metering of ground water use in watersheds where salmon and steelhead are at the greatest risk, it does not require metering of ground water use in other areas that hydrologically influence instream flows. Ground water withdrawals impact stream flows in the same basin, and because many communities are increasingly relying on ground water supplies, the new rule should require metering of ground water use throughout the state.

RESPONSE
Both the rule and the statute underlying the rule require that water right owners measure their water use if the use might affect critical or depressed salmon stocks. Where existing ground water use does not affect these stocks, the Legislature has stipulated that the enforcement of measurement is discretionary. The department has decided to retain this discretion in the rule.

COMMENTER

Mike Rossetto, Washington Environmental Council

COMMENT
Washington Environmental Council strongly supports statewide, universal measuring and reporting of water use. Measuring and reporting is fundamental to Ecology's ability to manage this most precious resource. Measuring and reporting water use is vital to our ability to protect and preserve instream flows and the fish and wildlife and other ecological values that those flows sustain. Measuring and reporting water use is also vital to our ability protect existing water right holders and plan for and accommodate new municipal, residential, commercial, and industrial use of water throughout the state. The rationale for, and importance of, measuring and reporting water use is therefore no less important in basins where salmon and steelhead are healthy than where salmonid populations have been identified as being depressed or critical.

As we've all been reminded by this year's drought, our state's ability to provide enough water to satisfy the competing demands of agriculture, industry, recreation, hydropower, fish and wildlife, and other uses is being stretched to the limit. Measuring and reporting water use is the key to our ability to know how much water people are using, whether they are taking more than they are legally entitled to use, implementing effective water conservation programs, and effectively manage this precious resource.

RESPONSE
Thank you for your comment.

COMMENT
In general, we support the new metering rule proposed by Ecology. The proposed rule corrects many of the defects that led to the Thurston County Superior Court decision ordering Ecology to revise the rule. However, the proposed rule suffers from a number of significant defects. The two major defects in the rule involve areas where the law appears to give Ecology some discretion. First, while the proposed rule requires water users to measure and record their water use, at this time it does not require the water users to report those measurements to Ecology.

RESPONSE
The statutes authorizing Ecology to require water measurement make it discretionary for Ecology to also require the reporting of water use data. We have decided to retain that discretion in the rule. In practice, however, we anticipate that we will require reporting in nearly every situation where we enforce measurement.

COMMENT
Second, while the proposed rule requires metering of ground water use in watersheds where salmon and steelhead are at the greatest risk, it does not require metering of ground water use in other areas.

RESPONSE
This is because the statutes underlying the measurement rule make enforcement of water use measurement on ground water rights that do not affect at-risk salmonid stocks discretionary for Ecology.

COMMENT
The rule also suffers from internal defects. The first of these internal defects involves an inappropriate, arbitrary, and capricious relaxation of the metering accuracy requirements.

The existing metering rule requires an accuracy of plus or minus 2% for measuring devices. The new rule loosens this up to plus or minus 5% for meters and allows an error of plus or minus 10% for meter system accuracy. To start with, the proposed rule is poorly drafted in this regard – proposed WAC 173-173-100(1) and (2) both reference the physically impossible feat of measuring more than 100% of the water actually passing through the meter or system. More importantly, there is simply no basis for abandoning the current 2% standard. At the September 24, 2001 public hearing in Tacoma, Ecology staff acknowledged that plus or minus 2% is the industry standard. Washington Environmental Council is not aware that Ecology has identified any evidence that water users are having trouble meeting the 2% accuracy requirement under the current rule, or that users would not be able to meet the 2% industry standard without available training and technical assistance. To depart from the current 2% standard which is also the industry standard without evidence or explanation of how such a change would result in better

management of the state's water resources is bad public policy, arbitrary and capricious, and not in accord with laws such as the administrative procedures act.

The problems with relaxing the metering accuracy requirements are exacerbated when viewed in light of Judge Hick's order requiring Ecology to achieve "substantial compliance" in terms of enforcing the metering statute. The Judge agreed to the plaintiffs' compromise position that "substantial compliance" be defined as metering 80% of the water use in certain watersheds within two years. If each of the users that compromise 80% of the water use are allowed by rule to miss reporting up to 10% of their use, the Judge's order would be severely undermined.

RESPONSE
We disagree. The current accuracy requirements (± 2 percent) are based upon the ability of a meter to operate under near-perfect laboratory conditions. The proposed requirements are based upon a level of accuracy that is actually achievable in real-world, field conditions. Ecology changed the accuracy requirements based upon review of vendor literature and discussions with the Water Use Measurement Technical Advisory Group and other experts in the industry.

COMMENT
The second of these internal defects involves a potential loophole for alternative methods of measuring that might allow significant wasteful and/or illegal use of water to go undetected. Potential loophole for alternative methods of measuring (WAC 173-173-170).

Washington Environmental Council has no formal objection to this section as drafted. However, comments by Ecology staff at the September 4, 2001 public hearing in Tacoma raise some concerns. At that hearing, Ecology staff specifically cited the "timed pump" method as one potential alternative method of measurement. Ecology staff explained that this method is based on knowing the capacity of a user's sprinklers, and then calculating the withdrawal by multiplying that capacity by the amount of time the sprinklers are in use. The problem, of course, is that that such a method would not be able to identify massive system losses (i.e. leaks) that might be occurring between the point of diversion and the sprinkler heads.

Approval of any alternative method of measurement, including but not limited to the timed pump method, must ensure that the standards set forth in proposed WAC 173-173-170(2) be strictly adhered to. (Of course this presumes that the accuracy requirement of WAC 173-173-100(2) will be tightened as recommended above.)

RESPONSE
We agree that leakage in a system before the point of discharge from the sprinkler heads could result in the under-recording of diversions. We have added language to the section regarding the acceptability of alternative methods that would allow the department to condition its approval upon the compliance of other conditions it deems necessary (e.g., leak detection and prevention).

COMMENT
Finally, Ecology's presentation at the September 4, 2001 public hearing in Tacoma highlighted the need to address two additional implementation issues – first, the distinction between the applicability of the rule on SASI streams and the enforcement plan for the 16 critical basins in the Governor's salmon plan, and second, the presumption that ground water must be metered in basins where salmonid populations are listed as depressed or critical. Each of these concerns will be described in more detail below.

Distinction between the applicability of the rule on SASI streams and the enforcement plan for the 16 critical basins in the Governor's salmon plan (WAC 173-173-040)

Proposed WAC 173-173-040(2)(b) correctly reflects the statutory mandate that Ecology enforce the metering statute for new and existing water rights where the surface water diversion or ground water withdrawal is "from waters containing depressed or critical fish stock." The metering statute makes it quite clear that metering is required for new and existing water rights from "waters in which the salmonid stock is depressed or critical, as determined by the department of fish and wildlife, or where the volume of water being diverted exceeds one cubic foot per second." RCW 90.03.360(2). Judge Hicks' February 11, 2000 order reaffirms that "where the salmonid stock is depressed or critical, that in those areas, if they're designated as such by the Department of Fish & Wildlife, that the ground water should be metered in those areas …" American Rivers, et al. v. Ecology, Thurston County Superior Court No. 99-2-00480-6, Transcript of Court's Ruling on Summary Judgment (February 11, 2000), p. 25.

The presumption that ground water must be metered in basins where salmonid populations are listed as depressed or critical.

The presentation on the rule by Ecology staff at the September 4, 2001 public hearing in Tacoma put a lot of emphasis on the ground water provision applying in only the 16 critical basins identified in the governor's water plan. This presentation was at odds with the text of the rule and the statute, since they both refer to waters where salmonid stock status is depressed or critical (i.e. SASI streams). The import of the 16 basins identified in the governor's salmon plan was a litigation position the plaintiffs took in American Rivers which was accepted by the judge to define "substantial" compliance for purposes of enforcement, but that to be in "full" compliance with the statute, the rule still had to apply in all SASI basins, regardless of whether or not they were in the 16 critical basins.

It is extremely important that Ecology understand and acknowledge that the rule must be applied as written – that is, it applies to existing water rights, including ground water rights, in every basin in the state with waters containing salmonid stocks identified by WDFW as depressed or critical. Judge Hick's order directs Ecology to come into substantial compliance regarding prioritizing enforcement of the rule in the 16 critical basins identified in the governors salmon plan, but it in no way limits the application of the rule to those 16 basins.

RESPONSE
We agree. The compliance plan applies to those basins where the lack of adequate streamflow is considered to be a factor leading to the critical or

depressed condition of salmon stocks. As you note, the Department of Fish and Wildlife has designated a number of additional areas beyond those where instream flow is considered to be a key cause for decline as containing critical or depressed salmon stocks. Regardless of the cause for decline, in areas where salmon are considered critical or depressed, Ecology's duty to enforce measurement of uses that affect those waters would be mandatory.

COMMENT
The presumption that ground water must be metered in basins where salmonid populations are listed as depressed or critical.

Another cause for concern arising from the Ecology staff presentation at the September 4, 2001 public hearing in Tacoma was a suggestion that Ecology might have to make an affirmative determination that ground water and surface water are in hydraulic continuity before requiring metering of ground water in basins where salmonids are SASI listed. The metering statute does not require such an affirmative determination. The statute in no way requires a showing that a diversion or withdrawal have an impact on a SASI listed population before the metering requirement kicks in. Indeed, the fact that the statute refers broadly to "waters of the state" where salmonids are depressed or critical establishes a statutory presumption that diversions or withdrawals in basins where salmonids are listed under SASI shall be metered. And Judge Hick's order, which Ecology did not appeal, makes it absolutely clear that the Ecology is required to require the metering of new and existing ground water in basins containing SASI listed salmonids. To do otherwise would be contrary to both law and good public policy – the legislature did not impose the burden on fish, fish advocates, or Ecology to make an demonstration of hydraulic continuity. To do so would be contrary to the statute and the Judge's order.

RESPONSE
The summary judgement order issued by Judge Hicks contained the following rulings regarding the applicability of RCW 90.03.360 to ground water rights:

"3. Respondent's motion for summary judgement is GRANTED, and Petitioner's motion for summary judgment is DENIED insofar as the Court concludes that RCW 90.03.360 does not require metering or measurement of new ground water permits except when such permits are granted in areas where salmon stocks are depressed or critical as designated by the Department of Fish and Wildlife <u>and</u> respondent has a basis for believing the ground water right may affect surface waters supporting depressed or critical stocks. (Emphasis added).
4. Respondent's motion for summary judgement is GRANTED, and Petitioners' motion for summary judgment is DENIED insofar as the Court concludes that RCW 90.03.360(2) does apply to existing ground water rights where salmonid stocks are depressed or critical as designated by the Department of Fish and Wildlife <u>and</u> respondent has a basis for believing the ground water right may affect surface waters supporting depressed or critical stocks." (Emphasis added)

Thus, the court clearly held that two conditions must be satisfied before Ecology is obligated to enforce measurement for ground water rights. The withdrawal must not only be in an area where salmonid stocks are critical or depressed, but also where Ecology "has a basis for believing" there may be an effect on such stocks. If Ecology does not have a basis for believing the withdrawal "may" affect the surface water supporting such stocks, there is no mandatory obligation to require the measurement of the ground water right and it may be at Ecology's discretion.

COMMENT
Metering water use is the first and most basic step we must take to make rational choices about whether and where to issue new water rights, to provide users with information necessary for them to become more efficient, and to be able to implement water management tools to promote conservation of this increasingly scarce resource. Metering is essential to implementing water conservation, regulating unauthorized use, restoring instream flows, and otherwise managing the resource. Until meters are installed, Ecology is helpless to curtail illegal or excessive water use, perpetuating practices that have contributed to the current salmon crisis. The legislature has given Ecology broad authority to require metering of ground water use throughout the state. Ecology owes it to the people of Washington to use that authority to protect fish and wildlife and all the law abiding people who use water in compliance with their permits.

This rule makes is important for the economy. Washington's fishing families and their jobs depend on keeping enough water in our rivers for fish to survive. Our ability to build new housing and attract new industrial development also depends on our ability to know whether or not there is enough water available to support that new development without hurting existing water users and, recreational values, and fish and wildlife. Metering not only gives water users the information they need to be more efficient, it's also a fairness issue - it prevents people who comply with their permits from being put at an economic disadvantage to those who don't. Considering the economic benefit water rights holders derive from their free use of the public's water supply, it's really very little to ask them to account for how much they're using.

The Washington Environmental Council appreciates the opportunity to comment on the proposed metering rule. We hope that Ecology will recognize both our expertise in this area and our longstanding commitment to having this law fully implemented and enforced by making adopting the changes we have recommended above to the proposed rule.

RESPONSE
Thank you for your comment.

COMMENTER

Karen Russell, WaterWatch of Oregon

COMMENT
WaterWatch of Oregon is a non-profit river conservation group dedicated to the protection and restoration of streamflows needed for healthy rivers in Oregon. We have a membership of over 800 people in the Pacific Northwest including the states of Oregon and Washington. Since its inception in 1985 WaterWatch has worked to ensure that all water users in Oregon (both surface and ground water users) are required to measure and report their water use. In 1993, in part because of WaterWatch's work, Oregon's Water Resources Department (WRD) adopted a policy that requires measurement and reporting conditions on every new permit issued. Since then we have continued to push WRD to require measurement of all water uses and have, for the past two legislative sessions, introduced bills in the Oregon legislature that would have required measurement of all water uses by the year 2004.

RESPONSE
Thank you for your comment.

COMMENT
The benefits of measurement and reporting to the state and the public at large are numerous. Measurement and reporting of water use is a critical tool for state water managers because it provides a base for making good resource management and policy decisions. Requiring water users to measure and report their water use can also help to promote voluntary compliance with permit conditions and promote water conservation. Measurement of water use, and restriction of water use based upon those measurements, can also restore streamflows needed for fisheries. For example, in 1997, in response to measurements taken by WaterWatch, WRD ordered installation of locking headgates and water control structures on major irrigation diversions from the Wood River located in Oregon's Klamath River Basin. WaterWatch subsequently commissioned a study to look at the relationship between measurement of water diversions and streamflow levels in the river. The study revealed that streamflows in the Wood River were much higher (as much as 30 cubic feet per second higher) than previous years as a result of the installation of headgates. Finally, measurement not only helps to protect and enhance instream flows, it protects users in compliance with the laws from those in non-compliance.

RESPONSE
Thank you for your COMMENT

COMMENT
The proposed rule is a balanced approach to meeting the requirements of the metering statutes and the recent judicial ruling on Ecology's duties under the law. However, the rule falls short in two key areas.

First, while the rule requires water users to measure and record water use, it does not require water users to immediately report hose measurements to the Department of Ecology (DOWE. Merely recording the information, without making the information available to DOE and the public ill not provide the critical information the state needs to make allocation and resource management decisions

RESPONSE
The statutes authorizing Ecology to require water measurement make it discretionary for Ecology to also require the reporting of water use data. We have decided to retain that discretion in the rule. In practice, however, we anticipate that we will require reporting in nearly every situation where we enforce measurement.

COMMENT
Second, metering of ground water use should be required statewide, not just in areas where salmon and steelhead are at the greatest risk. As surface waters throughout the west become increasingly over-allocated, people are turning to ground water to not only meet future growth needs, but to supplement existing water supplies. Increased pumping of ground water not only raises questions about the ability of the ground water resource to sustain increased pumping, it also raises questions about the effect of pumping on river flows. DOE has broad authority to require metering of ground water use throughout the state and should do so immediately.

RESPONSE
The Legislature has provided Ecology the discretion whether to enforce ground water use measurement in areas that do not affect critical or depressed salmon stocks. We have decided to retain that discretion in the rule.

COMMENT
Water is a public resource that provides great economic benefit to the holders of the rights who use this water for free. Measurement of water use is the first and most basic step to manage this public resource in a sustainable manner that balances the needs of private out of stream uses with public instream uses of water. This rule, with the above-mentioned changes, is critical if the state is to begin the address the problems cause by over a century of over-allocation and mismanagement of this public resource

RESPONSE
Thank you for your comment.

COMMENTER

Rolland E. Shade

COMMENT
To Whom It May Concern: Responding to the subject proposal let it be known that I, Rolland E. Shade, owner of a 1& 1/4 acre lot with home and private well and septic system, am vehemently opposed to the subject proposal as it is presently written. DOE officials tell us the rule does not target private wells. However, the language in the proposed rule leaves the door wide open for just that to happen. We have been lied to many times in the past by our politicians. If in fact the proposed rule does not target private wells for single residence homes, then let it be so stated in specific language to exempt private well water use for now and in the future. If the proposed rule in general would actually keep the salmon population from declining I could be in favor of same. Unfortunately, such actions by bureaucratic bungling and millions of wasted dollars and

man hours has not proved successful in the past and we have no reason to expect the above rule to provide anything different. About the only thing the proposed rule will do is place an exorbitant burden on our local farmers and force some of them out of business. Which of the two have priority, humans or salmon? Will the water flow in the rivers and the ground water be replenished with the funds collected by charging for such water use? I suspect not. I fail to recognize where the DOE or any other bureaucratic agency thinks that they can provide anything that can only be provided by God Almighty. May the blessing of divine guidance help you all in your deliberations.

RESPONSE

Please see page 21 for our discussion of the rule to exempt withdrawals and page 23 for our response to concerns over water use fees.

COMMENTER

Bill Zynda

I attended the hearing, but with so many testimonies and lateness of hour I decided to comment like this:

First, I am sorry that hearings have turned into "roasts" of gov. workers and politicians who bring an issue. I think rudeness is wrong, but so is deception on the part of the government/bureaus. The public has been lied to so many times, the trust is gone and I think its up to "y'all" to earn it back. There may be merit to monitoring/metering water supplies, but I believe most citizens feel that the environment protection is out of balance with human survival, from financial, freedom and many standpoints.

From where I sat in that 9.17 meeting, most felt that this was a means of getting a foot in the door to later meter private wells. Even though your speakers stated that private wells would not be affected, I do not see that in print in the handout material…plus I heard a lot of "yets" in the audience and I uttered one too!

If you will rewrite the rule change to clearly exempt private wells, you will be much better received. If it becomes necessary to include private wells later, then come back and ask for rule change approval in that area at that time.

The very last item (coincidental?) of the NEW SECTION, OTS-5041.2 on page 12, referring to WAC 173-173-220 opens the door to what I've said already and adds to the fear factor/trust issue problems you face at these hearings.

Until citizens can feel they are truly being heard and taken seriously, and until the gap of "them against us" can be bridged between gov. agencies/politicians and the "people", the relationships will worsen. We, the people, really do need to see an attitude of "of the people" at these town type meetings. We are seeing something like this happening in NYC and in fed. gov., including Congress, in the wake of the huge wake up call our country has just experienced. We need to see

this kind of "of the people" teamwork happen here, and all over America. And, what better time than now, when we need to be building each other up as opposed to the flip side?

RESPONSE
Please see our discussion of the applicability of the rule to exempt withdrawals on page 21

COMMENTER

Hertha Lund, Washington State Farm Bureau

COMMENT
On behalf of the more than 23,000 Washington State Farm Bureau members representing farmers and rancher, I am submitting the following comments on the Water Metering Rule. Since Farm Bureau members would be uniquely impacted by the measuring rules we submit the following comments:

On behalf of Farm Bureau I submit the following comments on specific issues:

Cost: Many of Farm Bureau members were concerned about the cost for the measuring devices and who pays. Clearly, under today's bad economic issues impacting agriculture, few if any farmers or ranchers could afford a substantial cost to comply with the rules. Therefore, we ask that you either provide assistance or link compliance with a timeframe that economically viable for farmers and ranchers.

RESPONSE
The actual cost of installing a meter will depend on a water users specific situation and the quantity of your diversion. It also is possible that a water user may be able to use indirect methods (e.g., power consumption or timing of withdrawals) of measuring his water use, thereby avoiding the costs associated with installing a meter or open channel measurement system. It also is possible that the Legislature could continue to appropriate funds to assist in defraying the costs of installing measuring devices, as it did this year. It would require Legislative authority for us to link compliance to any kind of economic viability timeframe.

COMMENT
Water Fees: There is concern that the proposed regulation will put into place a mechanism for a governmental agency to charge new or additional fees for water use. This would be unacceptable and contrary to water law in some cases. It is one thing to measure water for divisional purposes, but quite another if this mechanism were to include fees for the water or process.

RESPONSE
Water fees applicable to every water right holder would require new statutory authority. Ecology does have the authority to charge water use fees on those who use water for power production (RCW 90.16.060), but does not have the authority to charge other users. In any case, water measurement is not a necessary precursor to establishing a fee structure for water use. The Legislature could, for example, establish a flat fee for all users, or a fee based upon the permitted or claimed water right quantity (as opposed to actual use), or select any number of other possible fee structures.

COMMENT
Exemption for Small Wells: Farm Bureau members, like what seemed to be the majority of people commenting at the hearings, believe that wells exempted by RCW 90.44.050 should also be exempted from the provisions of the metering rule. If there is no water right permit, then there is no requirement because there is no permit to limit.

RESPONSE
RCW 90.44.050 provides an exemption from the water right permitting process under which certain specified users of less than 5,000 gallons per day may establish a water right to withdraw ground water. Exempt withdrawals nonetheless are regarded as full water rights. RCW 90.44.050 provides, "….to the extent that it is regularly used beneficially, [an exempt withdrawal] shall be entitled to a right equal to that established by a permit issued under the provisions of this chapter." Therefore, an exempt withdrawal is not exempt from compliance with water measurement requirements.

COMMENT
Ecology's Statement "We do not Intend to Meter Exempt Wells": If there is no intent to meter wells, then that language should be stated in the WAC. If in the future Ecology determines that it wants to meter exempt wells, then at that time Ecology should hold another rulemaking so that citizens have the opportunity to provide comment.

RESPONSE
Because the Department currently lacks the resources to enforce measurement of exempt withdrawals, Ecology currently has no plans to do so. As a legal matter, however, the Department lacks the authority to exempt this class of users from the statutory duty to measure water use if those withdrawals may affect salmonid stocks listed as critical or depressed. However, where ground water use is not believed to affect these stocks, it is discretionary for Ecology whether to enforce the measurement of it (See RCW 90.44.050, 250, 450).

COMMENT
10 gpm Flows Should Not be have to be Metered: We believe that monitoring flows of 10gpm is a waste of money. The cost to meter outweighs the benefit from metering such small flows.

RESPONSE
Whether the benefits of monitoring a flow of 10 gallons per minute exceed the costs is a question that, in certain circumstances, the Legislature has already answered in the affirmative. The Legislature, in enacting the measurement statute, has determined that water measurement is in the public interest. For water diversions that may affect critical or depressed salmon stocks, Ecology is required by statute to enforce the measurement of those diversions regardless of the quantity of water diverted. Ecology also is required by statute to enforce measurement of all new water rights it issues regardless of quantity. Ecology additionally must enforce measurement on those rights that exceed 1 cfs even if they do not affect critical or depressed stocks of salmonids. Ecology does, however, retain the discretion whether to enforce the measurement of existing uses that do not affect critical or depressed salmonids and are below 1 cfs in size.

COMMENTER

Connie Kelleher, American Rivers and Kristie E. Carevich, Center for Environmental Law & Policy

Thank you for the opportunity to comment on the Department of Ecology's water metering rule. The proposed rule represents a significant, encouraging development in water resources management for Washington.

American Rivers is a national, non-profit, 501(c)(3) conservation organization, incorporated in and with its principal place of business in Washington, District of Columbia. American Rivers has a growing membership of approximately 30,000 people. It has a Northwest regional office in Seattle, Washington, serving approximately 2,266 members in the region and approximately 1,200 members in Washington. American Rivers is the nation's leading river conservation organization, dedicated to protecting and restoring America's river systems and to fostering a river stewardship ethic. Along with its conservation efforts, American Rivers promotes public awareness about the importance of healthy rivers and the threats they face. American Rivers' programs address flood control and hydropower policy reform, endangered aquatic and riparian species protection, western instream flow, clean water and urban rivers. In the Northwest Office, we are particularly concerned with the restoration of in-river habitat conditions for spawning, rearing, and migration for salmon, including flow regimes that restore the functions associated with natural river conditions--the natural "hydrograph." The Center for Environmental Law & Policy (CELP) is a non-profit corporation registered in the state of Washington. CELP's purposes are to ensure clean, flowing waters for Washington. CELP works to ensure that Washington's water resources and the unique marine and riverine life that depend on these resources are conserved and protected. CELP's members live, work, recreate and use waters in and along Washington's streams and rivers. As an integral part of its work, CELP manages a water rights monitoring project that is devoted to overseeing the administration and enforcement of the Water Code, including decisions on applications for new water rights permits, transfers and changes made by the Washington Department of Ecology. The goal of this monitoring project is to ensure that these decisions serve to allocate water resources in the public interest and

protect the State's imperiled aquatic ecosystems. Understanding the extent of water use in the state is a vital component of managing the resource, and CELP has long been a strong advocate for metering as a key step to effectively manage water in Washington.
Washington's fish and water resources are in a state of crisis. Population growth and accompanying development have increased demand for water for agriculture, industry, and domestic use. Moreover, much of that consumptive use, particularly with respect to agriculture, is highly inefficient and wasteful. The increased appropriations from rivers and connected ground water have depleted instream flows needed to support fish habitat. Many of Washington's streams and rivers have insufficient flow to support fish. In some parts of the state, tributary streams dry up in the summer, leaving fish to die stranded in pools or on dry ground. Hundreds of other streams and rivers are over-appropriated and unable to withstand additional depletions. Low flows cause warming of streams beyond salmon's tolerance, killing of their invertebrate food source, and interference with migration.
Depleted streamflows are a major factor in the decline of salmonids throughout Washington. Bull trout and several salmon and steelhead populations within Washington have been listed as threatened or endangered under the Endangered Species Act. Additional Washington populations of coho and chinook salmon and cutthroat trout are proposed or candidates for listing.

Healthy fish populations depend on streamflow regimes that protect the ecological integrity of their habitat. The first step in restoring adequate streamflows for salmon in Washington is to gather solid data on actual water use to guide future decisions on management of the state's scarce water resources and salmon recovery planning. Mandatory metering and reporting of water use is essential to identifying excess appropriations of water, enforcing compliance with water rights permits, and making informed decisions on availability of water for new appropriations.

Water metering not only will help to restore salmon habitat, but it also will benefit those water users who follow the law. Those users who comply with their permits will not be at an economic disadvantage to those who do not. Sound and sustainable water management is impossible without measuring water use, especially in basins that are already over-allocated. For these reasons, many water users have endorsed water metering. For example, Yakima Basin irrigation district representatives have endorsed universal water metering for all surface and ground water diversions, regular reporting of water use, and effective monitoring and enforcement programs.

Finally, Washington law requires metering of all new water diversions in the state and all pre-existing diversions from waters that contain depressed or critical salmon stocks or which divert more than one cubic foot per second. RCW 90.03.360. Ecology's proposed water metering rule will meet the basic requirements of this statute as well as the recent judge's order requiring Ecology to update its rule implementing the water metering law.

RESPONSE
Thank you for your comment.

COMMENT
WAC 173-173-050 Reporting requirements. The proposed rule should include mandatory reporting requirements. It makes no sense to require users to measure and record their water use but not require them to report that use. In order for agencies, Tribes, conservation organizations, and the public to access and use this information, it must first be reported. Reporting is necessary for the public to be able to review compliance with permit conditions. For example, under the NPDES permitting program, permit holders must submit facility monitoring reports. These reports are available to the public for review. This is an important component of NPDES monitoring, compliance and enforcement.

Even if Ecology does not yet have an adequate data management system in place, it is important to begin gathering records now so that this information will be available in the future to analyze trends in water use and identify reoccurring violators. However, we encourage Ecology to take the necessary steps to get such a data management system in place as soon as possible. In order to foster more effective water resource management, better public participation, and government accountability, Ecology should establish an online (Internet) record of the reported data.

RESPONSE
We agree that reporting of water use is important. While the rule provides that Ecology may exercise its discretion whether to require reporting of water use, as do the statutes authorizing the rule, we anticipate that, in practice, Ecology will require reporting in nearly every case where it enforces measurement. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002.

COMMENT
At the September 4, 2001 public hearing on the metering rule in Tacoma, Ecology suggested that the ground water provision would be applied only to the 16 critical basins identified in the Governor's water plan. This is inconsistent with the statute and the proposed rule, which require metering "from waters in which the salmonid stock is depressed or critical." Waters containing depressed or critical salmon stocks must not be confused with the 16 critical basins identified in the Governor's water plan. In the lawsuit filed by the conservation groups against Ecology to force implementation of the metering statute, the judge defined "substantial compliance" with the order as enforcement of the rule in the 16 critical basins. However, the statute and the judge's order still require metering in depressed or critical salmon streams regardless of whether those waters are within the 16 critical basins.

RESPONSE
We agree. The compliance plan applies to those basins where the lack of adequate streamflow is considered to be a factor leading to the critical or depressed condition of salmon stocks. As you note, the Department of Fish and Wildlife has designated a number of additional areas beyond those where instream flow is considered to be a key cause for decline as containing critical or depressed salmon stocks. Ecology's duty to enforce measurement of uses that affect those waters is mandatory.

COMMENT
In response to questioning from the public, Ecology also stated that it would be responsible for making a positive determination that ground water withdrawals affect surface waters with depressed/critical salmon and hold some sort of public information session before the ground water portion of the rule would apply to a ground water user. This is inconsistent with the statute. The statute contains no requirement that Ecology make a positive determination that ground water actually affects the streamflow or the fish. To require such a determination be made impermissibly shifts the burden of protecting the resource to Ecology and fish advocates. Rather, there should be a presumption that ground water withdrawals in a depressed or critical basin affect surface waters.

RESPONSE
Please see our response to Mike Rossetto's letter on page 47.

COMMENT
The proposed rule requires metering of existing and new ground water withdrawals in waters containing depressed or critical fish stocks. However, the rule does not require ground water metering in other areas. We believe that the surface and ground water codes support a broader interpretation of RCW 90.03.360 that applies to all ground water withdrawals as well as surface water diversions. Regardless of the applicability of RCW 90.03.360 to ground water withdrawals, however, Ecology clearly has the authority to require metering of all ground water withdrawals.

While it is certainly important to require metering in waters that contain depressed or critical fish stocks, it is also important to protect streamflows and ground water supplies in watersheds where salmon runs are still healthy. We urge Ecology to use its authority to require metering of all ground water withdrawals without delay, beginning in waters containing depressed/critical salmon stocks and extending throughout the state. Universal metering is necessary to protect fish and wildlife and all people who are complying with their water permits.

RESPONSE
The statutes underlying the measurement rule make enforcement of water use measurement on ground water rights that do not affect at-risk salmonid stocks discretionary for Ecology. We have decided to retain that discretion in the rule.

COMMENT
WAC 173-173-030 Definitions
The terms "divert" and "withdraw" are used throughout the proposed rule, at times interchangeably. These terms should be defined in the definitions section and used consistently throughout the entire rule. For example, in WAC 173-173-040, the first sentence should be changed to "The requirements of this chapter apply to the owner or owners of any water diversion or withdrawal and to the department."

RESPONSE
We have added a definition of diversion in the definition section.

COMMENT
WAC 173-173-060(1) Reporting
As currently written, this rule appears to exempt from the reporting requirements parties who currently measure water use but do not report that use. The language in this section should be changed to:

"Every responsible party shall report the maximum instantaneous discharge of water diverted or withdrawn over the reporting period, except that for responsible parties who already measure and report according to the terms of a water right, such parties will remain bound by such terms until directed to modify the manner in which they report their water use by the department."

Ecology should also add language to clarify that parties who already measure but do not report must now begin to report that use in accordance with the new rule.

RESPONSE
Whether to require a user to report his water use is a discretionary action for Ecology. Modifying or adding reporting requirements to the condition of an existing water right will require the department to issue an order to that right holder modifying the conditions of the water right. This language requires such water right holders to continue abiding by the terms of their existing water rights until directed to do otherwise by the department.

COMMENT
A. Accuracy of the measuring devices.
The proposed rule loosens the accuracy requirement to plus or minus 5%, which is a lower standard than the old rule requirement and the industry standard of plus or minus 2%. See WAC 508-64-020 (2) (Meter Specifications). Ecology has presented no evidence that users were unable to meet the 2% accuracy requirement under the old rule, so this standard should be retained.

In addition, WAC 173-173-100(2) needs further clarification. We read this to allow a plus or minus 10% accuracy for a meter coupled with a data recorder, but the language could be clearer.

RESPONSE
The current accuracy requirements (± 2 percent) are based upon the ability of a meter to operate under near-perfect laboratory conditions. The proposed requirements are based upon a level of accuracy that is actually achievable in real-world, field conditions. Ecology changed the accuracy requirements based upon review of vendor literature, and discussions with the Water Use Measurement Technical Advisory Group and other experts in the industry.

COMMENT
B. Departure standard.
WAC 173-173-100(3) states that the "department may modify the required degree of measurement when it determines that a different degree of measurement precision is appropriate

for the purpose for which the data is being collected." Ecology should specify a standard for when such a departure is appropriate.

RESPONSE
We have revised this section to stipulate that the department may modify reporting requirements on a case by case basis if necessary to meet those goals specified in new section 015.

COMMENT
WAC 173-173-180 Recordkeeping
Ecology should specify how long records must be retained. We recommend that Ecology require water users to retain records for five (5) years).

RESPONSE
We have revised the language to require water users to retain their records "as long as practicable."

COMMENT
Implementation and enforcement of the rule
Ecology must have a fully developed and staffed enforcement strategy that provides for comprehensive monitoring, reporting, and strategic enforcement actions to ensure compliance with the new metering rule. An effective strategy is one that induces those subject to legal obligations to fulfill them completely, timely, and at the lowest possible cost to the government. In order to induce that behavior, Ecology must create a reasonable expectation in water users that fulfillment of their legal obligations will be less costly than failure to fulfill them. American Rivers and CELP believe an effective implementation and enforcement strategy should include the following components:

a) an education component to educate water rights holders of the importance and purpose for metering, including protecting the rights of existing water rights holders, the requirements of the law, and how to properly meter and report water use;

b) a detection component to effectively detect those who have violated those requirements;

c) a penalty component, which penalizes non-complying individuals in targeted enforcement actions so that the cost of noncompliance is greater than the cost of compliance;

d) a publication component, which widely publicizes the consequences of noncompliance, including the imposition of penalties that clearly exceed the costs of compliance; and

e) firmly established deadlines for implementation of the above components.

By following these principles, Ecology can minimize its enforcement costs and promote fairness among water users, resulting in widespread voluntary compliance.

RESPONSE
Thank you for your comment.

COMMENTER

Ron Anderson, Central Washington Home Builders Association

COMMENT
I am concerned about this process in a couple areas. First, while we all understand that there is a need to use water more wisely, & to move it around in a better matter, 1 am concerned that this will lead to other uses. These uses include the monitoring and complete control of water usage by individuals such as who will get what amount for what intended use. Then the state will add to this by attaching charges in the form of fees for monitoring the "program." Once these two things are in place they will be next to impossible to get removed or even modified to any extent. At the public on Sept 12 here in Yakima, I made these same statements. I see this as only another new tool for the state to use against the citizens to establish another way of collecting money via fees that will no doubt be imposed at same point [in] time. I know you & others will say this isn't the intent and maybe it isn't. But you & I know my fears will become a reality down the road as this is a very large part of the overall plan as It was originally set out to be.

RESPONSE
Please our response to concerns about water use fees on page 23.

COMMENTER

Adam Berger

COMMENT
I generally support the proposed rule, but it needs to be improved in two ways: 1) by requiring that water users report their usage to the Department beginning immediately; and 2) by requiring that ground water be metered through out the state, not just where salmon and steelhead currently are in trouble.

RESPONSE
The statute (RCW 90.03.360) authorizing Ecology to enforce water measurement provides that Ecology may exercise its discretion when to require water use. Ecology has chosen to retain this discretion in the rule. In practice, we anticipate that reporting of water use will be required in nearly every case and the rule contains provisions stipulating the kind of information Ecology may request when it requires reporting.

According to Thurston County Superior Court, Ecology must enforce the measurement of ground water use where it has a reason for believing that such use will affect surface waters containing critical or depressed fish stocks. RCW 90.44.050, 250 and 450 give Ecology the discretion to require the measurement of

ground water use in other situations. Ecology has not chosen to exercise its discretion to require universal measurement of all ground water users in the rule. The department does not have the resources at this time to enforce the universal measurement of ground water use.

COMMENT
Water users must begin reporting their water use now. Reporting now will help document trends in water use that will be helpful to resource managers in the future. Even if the Department needs additional time to set up a comprehensive data management system, department staff watershed planning groups, Indian tribes, and citizen activists can start using the information right away. Requiring measurement and recording without reporting greatly diminishes the effectiveness of the metering requirement

RESPONSE
We agree that reporting of water use is important and intend to require it. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002.

COMMENT
Water metering is a small price to pay for free use of a public resource. Metering is essential for informed decision-making by the Department, new economic interests, and the existing water users themselves. Metering is also a fairness issue - it prevents users who comply with their permits from being put at an economic disadvantage by those who do not. The Department owes it to the people of Washington to use its authority to protect fish and wildlife and all the law-abiding water users by requiring metering throughout the state and instituting reporting requirements immediately

RESPONSE
Thank you for your comment.

COMMENTER

Colette AL Kostelec, P.E

COMMENT
I would like to provide the following comments regarding the new metering rule proposed by Ecology. I support the proposed rule because I feel it provides an effective and balanced approach to meeting the basic legal requirements of the statute and the recent judicial decision. Metering water use is essential to the management of Washington State's water resources. Metering is vital to Ecology's ability to curtail illegal or excessive water use - water metering benefits water users who follow the law.

RESPONSE
Thank you for your COMMENT

COMMENT
However, I would like to point out two areas of concern regarding the proposed rule: 1) the rule must require reporting of the data collected, and 2) metering of ground water should be required throughout the state, not just within those areas currently at the greatest risk.

It is important to have water users begin reporting their water use now. Reporting now will help document trends in water use that will be helpful to resource managers in the future, such as identifying those who consistently use more water than they have a right to. Even if it may take Ecology some time to set up a data management system, the public will have access to the information today. Considering the economic benefit water rights holders derive from their free use of the public's water supply, it's really very little to ask them to account for how much they're using.

The legislature has given Ecology broad authority to require metering of ground water use throughout the state. Ecology owes it to the people of Washington to use that authority to protect fish and wildlife and all the law-abiding people who use water in compliance with their permits. Let's be a little forward looking here, and identify areas where problems are looming so that we can take action before it's too late. Without this most basic information regarding water use, we will remain in our current mode of operation, which for too long seems to have been trying to close the barn door after the cow has run out

RESPONSE
The statute (RCW 90.03.360) authorizing Ecology to enforce water measurement provides that Ecology may exercise its discretion when to require water use. Ecology has chosen to retain this discretion in the rule. In practice, we anticipate that reporting of water use will be required in nearly every case and the rule contains provisions stipulating the kind of information Ecology may request when it requires reporting.

According to Thurston County Superior Court, Ecology must enforce the measurement of ground water use where it has a reason for believing that such use will affect surface waters containing critical or depressed fish stocks. RCW 90.44.050, 250 and 450 give Ecology the discretion to require the measurement of ground water use in other situations. Ecology has not chosen to exercise its discretion to require universal measurement of all ground water users in the rule. The department does not have the resources at this time to enforce the universal measurement of ground water use.

COMMENTER

Gerald A. Eller

COMMENT
Please enact strong water metering rules for the entire state of Washington. This is vital for the economic health and viability of our fish related economy and for the survival of our threatened runs of salmon and steelhead.

RESPONSE
Thank you for your comment.

COMMENT
It appears that the proposed rules on metering would not require water users to report their documented usage to DOE. This is a mistake. What is the point of recording usage if DOE does not then know the amount being used

RESPONSE
We agree that reporting of water use is important. While the rule provides that Ecology may exercise its discretion whether to require reporting of water use, as do the statutes authorizing the rule, we anticipate that, in practice, Ecology will require reporting in nearly every case where it enforces measurement. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002.

COMMENT
Metering, reporting and enforcing is an excellent tool to determine what amount of water is being used, what will be available for future use and is a benefit to those who use their water properly

RESPONSE
Thank you for your comment.

COMMENT
The waters of Washington State belong to all the people of this state. We want you to provide water for farming, urban use and recreation and well as for fish. Water metering and reporting are important tools in this effort

RESPONSE
Thank you for your comment.

COMMENTER

Gene Jenkins

COMMENT
The following are comments on the proposed Water Metering and Measuring WAC. As I indicated during the Technical Meetings that I attended I feel that there are some areas that need to be addressed differently then the Department seems to think need done. All of these comments are based upon the version of the proposed WAC that was distributed on the internet.

WAC 173-173-040:
You need to indicate that anyone who lives within the boundaries or are serviced by an irrigation district, water district, community well or municipal water service provider are not subject to

these reporting requirement so long as they comply with the measuring requirements required by water provider.

RESPONSE
We intend this rule to only apply to source meters and primary diversions. We have added language to make this more clear.

COMMENT
WAC 173-173-050 You need to indicate that anyone who is in an area where a Stream Patrolman is working at the direction of the Department although the Stream Patrolman may not be an employee of the Department shall not be required to report. It is the function of the Stream Patrolman to read all measuring devices and regulate all waters within their jurisdiction.

RESPONSE
We have added language that would clarify that Ecology may accept data submitted by a Stream Patrolman on behalf of individual diverters.

COMMENT
It should not be up to the any individual to notify the Department of any change in address or change in ownership of a water right. If the Department wants to enforce this proposed WAC then it is the responsibility of the Department to hire enough additional personnel to properly operate under this proposed WAC. I further feel that it should be up to the Department to hire enough additional personnel to comply with all aspects of the reporting requirements without placing the burden on the individuals. If the Department is looking for any degree of compliance then it is up to the Department to read the meter or measuring devices

RESPONSE
This provision has been deleted.

COMMENT
WAC 173-173-100:
There was a long discussion concerning the accuracy of meters installed in pressure system at the Water Metering and Measuring Technical Advisory Group. As was indicated by myself and others your accuracy requirements for dirty water systems (i.e., surface water irrigation systems), is not obtainable. The accuracy of + or -5% is obtainable in the lab but not very likely in the real world. I would suggest that you follow the recommendations of several of the technical committee members and go with + or -10%. Even at + or -10% you are asking for a very accurate reading.

The Department needs to indicate here that it realizes that there is a vast difference in “clean” water systems (i.e., potable or well water) and “dirty” water systems which are usually surface water systems. The Department further needs to write regulations that deal with these types of systems differently and not try to lump them together.

RESPONSE
Ecology discussed potential accuracy requirements with a number of different users (both in the Technical Advisory Group and others) with experience in water measurement. Values between ±2 and 15% were generally suggested. The low end of 2% was always in reference to shop calibration of meter with clean water. Ten to fifteen percent was most often suggested as an appropriate in-the-field measurement system accuracy. Most users believed that ±10% is a tight, but usually achievable, value for measurement systems.

The default system accuracy requirement will be ± 10%. The ± 5% accuracy requirement in the rule is in reference to the manufacturer's rating of the meter itself. Ecology does recognize that some applications may not be able to achieve these and there is a clause in the rule that allows water users to petition Ecology to change a requirement on a case-by-case basis for those situations where the measurement or reporting requirements are not feasible.

COMMENT
WAC 173-173-210:
The Department needs to insert something like the following language in this section. In those areas where a general adjudication, adjudication, or on going Court Case the appeal of the Departments decision needs to be made directly to Court of Jurisdiction. I direct your attention to a Court Order issued by Judge Walter Stauffacher in the Yakima River Basin Adjudication concerning this matter. Judge Stauffacher ruled that appeals of the Department's decisions pertaining to surface water will be filed with his Court and not the Pollution Control Hearing Board

RESPONSE
As written, the proposed language only addressed the department's orders, not orders of a court conducting an adjudication, so there is no proposal for appeals of the court's orders to go to the Pollution Control Hearings Aboard - - a course of action the department could not compel in any case. Nonetheless, Ecology has revised this section to address your concern. The new language states, "Appeals may be filed with the pollution control hearings board in accordance with RCW 43.21B.230, except that appeals of orders to measure water use issued by a court conducting a general adjudication of water rights pursuant to RCW 90.03.110 - 90.03.245 shall be filed in accordance with the applicable Washington Court Rules."

COMMENTER

Don Williams

COMMENT
The proposed new section WAC 173-173-040 "To whom does this rule apply?" does not adequately and clearly state the application of this new rule. This section or some other section(s) of the new rule should be modified to reflect the following:

1. Proposed WAC 173-173-040 makes reference to "any water diversion" as though it was clear what this means. However, it is not clear whether this new rule applies only to surface water or to both surface water and ground water. The wording proposed in WAC 173473-040, "any water diversion" needs clarification and a clear statement as to what "water diversions" are affected.

2. If the new rule is to include ground water "diversions", then the limitations imposed on ground water metering under the 'Order Denying Respondent's Motion To Dismiss" that was filed in Thurston County Superior Court on March 22, 2000 must be included. Specifically, if ground water metering is to be required in the new rule, then the new rule must include the stipulations of the court order that the Department of Ecology must have a basis for believing the ground water right may affect surface waters supporting depressed or critical fish stocks. In the court order, the court imposed on DOE the responsibility for first showing that a nexus exists between the ground water right under consideration and a related surface water that supports depressed or critical fish stocks. Accordingly, the new rule must include the statement that it is solely DOE's responsibility to first show that such a nexus exists as a prerequisite for applying the new rule, and that is not the owner's responsibility to show that such nexus does not exist.

RESPONSE
We have added a definition for diversion to the definitions section (WAC 173-173-030).

We agree that the department must have a basis for believing that the ground water use "may" have an effect on the surface water before the department must enforce measurement of that ground water use. The department has the discretion to require the measurement of ground water uses even if such a nexus does not exist, however, pursuant to RCW 90.44.050, 250 and 450.

COMMENT
If the new rule is in any way going to require metering of ground water, then the exemptions afforded under RCW 90.44.050 must be included and clearly stated in the new rule. Specifically, there are ground water permit exemptions for stock-watering purposes, for the watering of a lawn or noncommercial garden not exceeding one-half acre in area, for single or group domestic uses in an amount not exceeding five thousand gallons a day, and for an industrial purpose in an amount not exceeding five thousand gallons a day.

The Department of Ecology stated in its press release' (but nowhere in the proposed new rule), "currently the Department of Ecology has no intention of requiring people with small, individual water wells to measure their use." However, the exemptions of RCW 90.44.050 are much broader than being applicable only to "small, individual water wells." Accordingly, these exemptions must be clearly stated in the new rule

RESPONSE
RCW 90.44.050 provides an exemption from the water right permitting process under which certain specified users of less than 5,000 gallons per day may establish a water right to withdraw ground water. Exempt withdrawals nonetheless are regarded as full water rights. RCW 90.44.050 provides, "….to the extent that it is regularly used beneficially, [an exempt withdrawal] shall be entitled to a right equal to that established by a permit issued under the provisions of this chapter." Therefore, an exempt withdrawal is not exempt from compliance with water measurement requirements.

COMMENTER

Hillary Franz

I am writing to you in regards to the Department of Ecology's proposed rule regarding water metering requirements. I believe metering water use is fundamental to Washington's ability to manage its water resources. Without metering, it becomes difficult to know how much water people are using and whether they are taking more than they are legally entitled to, which in turn makes it difficult to plan for sustainable water use now and in the future.

The proposed rule is an important rule. Metering provides the users themselves with information necessary for them to comply with their permits, be more efficient and implement effective conservation strategies. Metering not only gives water users the information they need to be more efficient, it's also a fairness issue - It prevents people who comply with their permits from being put at an economic disadvantage to those who don't.

Metering water use is also essential to implementing water conservation, regulating unauthorized use, restoring instream flows, and otherwise managing this increasingly scarce resource. Metering is the first and most basic step in making rational choices about whether and where to issue new water rights. Our ability to build new housing and attract new industrial development also depends on our ability to know whether or not there is enough water available to support that new development without hurting existing water users, recreational values, and fish and wildlife.

This role is important for the economy. Salmon and water are two of this state's most valuable economic resources Washington's fishing families and their jobs depend on keeping enough water in our rivers for fish to survive. Depleted streamflows are a major factor contributing to the decline of salmon stocks throughout the state. In some parts of the state, salmon streams already run dry in the summer, leaving fish stranded in pools or on dry ground where they die from heat, predators, or the lack of water. hundreds of streams in the state currently have salmonid stocks designated as depressed or critical in part because of inadequate instream flows. In order to solve this problem, we need to know how much water people are using. Metering is an important part of restoring our threatened salmon and steelhead.

The legislature has given Ecology broad authority to require metering of ground water use throughout the state. Ecology owes it to the people of Washington to use that authority to protect fish and wildlife and all the law-abiding people who use water in compliance with their permits.

RESPONSE
Thank you for your comment.

COMMENT
Generally, I support the proposed new metering rule, but the rule needs to be improved in several key areas. These areas are as follows:

1. The proposed rule needs to require that reporting begin immediately. Starting reporting now will help document trends in water use that will be helpful to resource managers in the future, such as identifying those who consistently use more than they have a right to. 2. While the proposed rule requires water users to measure and record their water use. it does not require the water users to report those measurements to Ecology. Recording the information without making it available to Ecology does not give Ecology any means to measure actual water use and hold the water users to their legal limit. Metering is vital to Ecology's ability to curtail illegal or excessive water use. Water metering benefits and has been endorsed by water users who follow the law. For example, Yakima River basin irrigators long ago endorsed universal water metering. Making water rights holders account for how much they are using is a limited burden on them given they are already measuring and recording their water use

RESPONSE
We agree that reporting of water use is important. While the rule provides that Ecology may exercise its discretion whether to require reporting of water use, as do the statutes authorizing the rule, we anticipate that, in practice, Ecology will require reporting in nearly every case where it enforces measurement. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002.

COMMENT
The proposed rule needs to require that ground water be metered through out the state, not just where salmon and steelhead are listed under the Endangered Species Act. Because ground water pumping often negatively impacts stream flows in the same basin, and because many communities are increasingly relying on ground water supplies, the new rule should require metering of ground water use throughout the state

RESPONSE
According to Thurston County Superior Court, Ecology must enforce the measurement of ground water use where it has a reason for believing that such use will affect surface waters containing critical or depressed fish stocks. RCW 90.44.050, 250 and 450 give Ecology the discretion to require the measurement of ground water use in other situations. Ecology has not chosen to exercise its discretion to require universal measurement of all ground water users in the rule.

The department does not have the resources at this time to enforce the universal measurement of ground water use.

COMMENTER

Steve George, Hop Growers of Washington

COMMENT
There is concern that the proposed regulation will put into place a mechanism for a governmental agency to charge new or additional fees for water use. This would be unacceptable and contrary to water law in some cases. It is one thing to measure water for divisional purposes, but quite another if this mechanism were to include fees for the water or process

RESPONSE
Please see our response to concerns about water use fees on page 23

COMMENT
There is concern over the potential cost of measuring devises. DOE should have some sort of cost share program available if costs to install devices is above a specified amount

RESPONSE
It is the obligation of the diversion owner to fund the installation of measuring facilities necessary to measure his diversion of public waters. The Legislature may, however, decide to assist users in funding the installation of the facilities. Please see our response to concerns about the cost of water measurement facilities on page 23.

COMMENT
Water measuring flexibility is a component of the proposal. However, there is concern the department will be more rigid than proposed. The department should keep in mind some of the thought process from the oversight committee which was that its more important to measure the water in some form, than the accuracy of the measurement

RESPONSE
We agree that flexibility is fundamental to successful implementation and fair application of the rule. We have incorporated provisions (e.g., WAC 173-173-175) allowing the department to be flexible with respect to application of the accuracy requirements, and also with respect to other aspects of the rule.

COMMENTER

James Chapman

COMMENT
Although I live in a suburban city, I own the farm in northeast Oregon where I grew up. I rent most of my land for pasture to a local farmer. The farm has 119 acres with water rights from the Lostine River and I belong to a local ditch company. I don't know how the system works in Washington, but my experiences in Oregon have given me a good sense of what is needed to provide and assure a fair distribution of state water while retaining enough to support fish and wildlife.

In Oregon the amount of water we may take from the river each month depends on our acreage and the particular month. Right now, the USDA Natural Resources Conservation Service measures and reports the total amount each ditch takes out of the river, but there is no requirement for each farm to measure the amount it takes out of the ditch. Until very recently, our ditch consistently exceeded the allowable monthly takeout in late summer and there was a lot of finger pointing as to whom is the biggest culprit. Furthermore, this year's drought has shown that Washington State's ability to provide enough water to satisfy everyone's demands is being stretched to the limit. Metering is essential to conserving water, detecting unauthorized use, restoring instream flows, and otherwise managing this increasingly scarce resource. It provides the data needed to determine whether and where to issue new water rights. The Department of Ecology has been given broad authority to require metering of ground water use throughout the state. The Department owes it to the people of Washington, especially those abide by the law and comply with their permits, to use that authority to help conserve our water and protect fish and wildlife. Metering provides the users themselves with information necessary for them to comply with their permits and become more efficient. It also prevents people who comply from being put at an economic disadvantage compared to those who don't. Metering is vital to the Department's ability to curtail illegal or excessive water use. It has been endorsed by water users who follow the law. For example, Yakima River basin irrigators endorsed universal water metering long ago. Reporting water use will help document trends and help resource managers in many ways, such as identifying those who consistently use more than they have a right to. Watershed planning groups, environmental organizations, Indian tribes, and citizen activists can start using the information right away, even if it takes the Department of Ecology some time to set up a data management system. Metering is an important part of restoring our threatened salmon and steelhead. Depleted stream flows are a major contribution to the decline of salmon runs throughout the state. In some areas, salmon streams actually run dry in the summer, leaving fish stranded in pools or on dry ground. Hundreds of streams in the state currently have depressed or critical salmon stocks partly because of inadequate stream flows. In order to help solve this problem, we need to know how much water people are using. This rule is important for the economy. Washington's fishing families depend on keeping enough water in our rivers for fish such as salmon to survive. Our ability to build new housing and attract new development depends on our ability to know if enough water is left to support it without hurting existing water users, recreation, and fish and wildlife. Considering the economic benefit water rights holders derive from their free use of the public's water supply, it's really very little to ask them to account for how much they're using.

COMMENT
It does not require water users to report measurements to the Department of Ecology. Recording the information does not do anyone any good unless that information is made available. Reporting should begin immediately.

RESPONSE
We agree that reporting of water use is important. While the rule provides that Ecology may exercise its discretion whether to require reporting of water use, as do the statutes authorizing the rule, we anticipate that, in practice, Ecology will require reporting in nearly every case where it enforces measurement. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002

COMMENT
It requires metering of ground water use in watersheds where salmon and steelhead are at greatest risk, but not elsewhere. Because ground water pumping often impacts stream flows in the same basin, and because many communities increasingly rely on ground water, ground water use should be metered throughout the state

RESPONSE
The Legislature has provided Ecology the discretion whether to enforce ground water use measurement in areas that do not affect critical or depressed salmon stocks. We have decided to retain that discretion in the rule

COMMENTER

James Roberts

I'd like to make some comments on the proposed new water- metering rule. Metering the use of water is absolutely essential to regulating unauthorized use, implementing water conservation, regulating and restoring instream flows, and otherwise managing Washington's precious water. Before we issue any new water rights we must know how much surface water is already being used in each specific watershed and how much ground water is being pumped from each specific aquifer.

The Department of Ecology has broad authority, granted by the state legislature, to require metering of ground water use throughout the state. You should use that authority to protect fish, wildlife, and those users who are following the rules and only using what the rules allow.

Reporting should begin immediately and should be required metered throughout the state, not just where salmon and steelhead are having problems. Otherwise you won't have the necessary basic knowledge to head off new problems BEFORE THEY HAPPEN! Know what I mean? Preventative action is always WAY cheaper than fixing things after the damage is already done.

Unnaturally low streamflows are a critical factor in the decline of salmon, steelhead, and trout stocks throughout the state. Some streams and rivers even run dry in the summer. In order to

solve this problem, we need to start by knowing just how much water is being used and who is using it.

Metering and reporting will help document water use, such as identifying those who consistently use more than they have a right to. Don't you think we should do that? Isn't it only fair to other users and the general public? Watershed planning groups, environmental groups, Indian tribes, and other citizen activists can start using the metering information today, if you folks would start collecting it. Many water users who follow the law, like the Yakima River Basin Irrigators have endorsed universal water metering.

The benefits to the Washington State economy would be numerous. Salmon are one of our most valuable economic resources. The jobs and families of our fishermen depend on keeping enough water in our rivers for fish to thrive (not just barely survive) . Should we support water use by marginally profitable or money losing farm operations that only survive on government handouts? I think not! We need to know if there is enough water available for any new water users that will NOT hurt existing water users, recreational values, fish, and our priceless heritage of native flora and fauna.

Considering the economic benefit that water rights holders derive from their FREE use of the public's water supply, it's really very little to ask them to account for how much they're using.

Metering provides the users themselves with information that is necessary for them to comply with their permits. How can they know if they are in compliance if they don't have an accurate measurement of how much they are using? Metering would also give water users the information they need to implement effective conservation strategies. And it also prevents water users who DO comply with their permits from being put at an economic disadvantage to those who DON'T.

> *RESPONSE*
> *We agree that reporting of water use is important. While the rule provides that Ecology may exercise its discretion whether to require reporting of water use, as do the statutes authorizing the rule, we anticipate that, in practice, Ecology will require reporting in nearly every case where it enforces measurement. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002.*

The Legislature has provided Ecology the discretion whether to enforce ground water use measurement in areas which do not affect critical or depressed salmon stocks. We have decided to retain that discretion in the rule

COMMENTER

Jerry McBride

COMMENT
The rule does not require water users to report measurements to the Department of Ecology. Recording the information does not do anyone any good unless that information is made available to the agency and the public.

While the proposed rule requires metering of ground water use in watersheds where salmon and steelhead are at the greatest risk, it does not require metering of ground water use in other areas. Because ground water pumping often negatively impacts stream flows in the same basin, and because many communities are increasingly relying on ground water supplies, the new rule should require metering of ground water use throughout the state.

RESPONSE
We agree that reporting of water use is important. While the rule provides that Ecology may exercise its discretion whether to require reporting of water use, as do the statutes authorizing the rule, we anticipate that, in practice, Ecology will require reporting in nearly every case where it enforces measurement. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002.

The Legislature has provided Ecology the discretion whether to enforce ground water use measurement in areas which do not affect critical or depressed salmon stocks. We have decided to retain that discretion in the rule

COMMENTER

Ronald Franz

COMMENT
The proposed rule needs to require that reporting begin immediately. Starting reporting now will help document trends in water use that will be helpful to resource managers in the future, such as identifying those who consistently use more than they have a right to.

While the proposed rule requires water users to measure and record their water use, it does not require the water users to report those measurements to Ecology. Recording the information without making it available to Ecology does not give Ecology any means to measure actual water use and hold the water users to their legal limit. Metering is vital to Ecology's ability to curtail illegal or excessive water use. Water metering benefits and has been endorsed by water users who follow the law. For example, Yakima River basin irrigators long ago endorsed universal water metering. Making water rights holders account for how much they are using is a limited burden on them given they are already measuring and recording their water use

RESPONSE
We agree that reporting of water use is important. While the rule provides that Ecology may exercise its discretion whether to require reporting of water use, as do the statutes authorizing the rule, we anticipate that, in practice, Ecology will

require reporting in nearly every case where it enforces measurement. We anticipate having an operational data management system for the purpose of storing and analyzing water use data by the end of 2002.

COMMENT
The proposed rule needs to require that ground water be throughout the state, not just where salmon and steelhead are listed under the Endangered Species Act. Because ground water pumping often negatively impacts stream flows in the same basin, and because many communities are increasingly relying on ground water supplies, the new rule should require metering of ground water use throughout the state.

The Legislature has provided Ecology the discretion whether to enforce ground water use measurement in areas that do not affect critical or depressed salmon stocks (this is a different, but related, designation than whether a species is listed as threatened or endangered under the Endangered Species Act. We have decided to retain that discretion in the rule.

COMMENTER

Board of Skagit County Commissioners

We, the Board of Skagit County Commissioners, serve as Skagit County's legislative authority. As such, we are concerned with Washington State legislative and rulemaking activities that affect the operations of County government and, in turn, the citizens of Skagit County. We would like to submit the following comments and questions into the official record concerning proposed WAC 173-173, "Requirements for Measuring and Reporting Water Use".

COMMENT
1) The Board is concerned about apparent contradictions and ambiguities in the Department of Ecology's (DOE's) approach to exempt ground water withdrawals under the proposed rule. DOE has indicated they "have no intention of requiring people with small, individual water wells to measure their use" (news release 0 1-147). However, a section of proposed WAC 173-173 states that RCW 90.03.360 directs DOE to "require metering or measurement by other approved methods as a condition for all previously existing water rights or claims if: (a) The diversion or withdrawal is from waters in which the salmonid stock status is depressed or critical, as determined by the Washington State Department of Fish and Wildlife." DOE has previously indicated that it considers exempt wells to be exempt only with respect to permitting: an exempt well, drilled and put to beneficial use, does then become a water right and is subject to regulation as such. Thus, an exempt well would appear to be subject to the measuring rule.

RESPONSE
The department has stated, in the press release you cite and in other public forums that it "currently" has plans to enforce measurement on exempt withdrawals. Because the Department currently lacks the resources to enforce

measurement of exempt withdrawals, Ecology currently has no plans to do so. Please see discussion on this issue on page 21.

COMMENT
Does DOE consider the owner of an exempt well (that has been drilled and put to beneficial use) as holding a water right that would be subject to both RCW 90.03.360 and proposed WAC 173-173?

RESPONSE
A withdrawal commenced and put to beneficial use pursuant to RCW 90.44.050 (the statute exempting certain ground water withdrawals from the water right permitting process) is considered a water right. Where such withdrawals may affect critical or depressed fish, Ecology would have a duty to enforce measurement. Ecology will exercise this duty insofar as it is able to do so with the resources provided to it by the Legislature. At this point, Ecology does not have the resources to enforce measurement of exempt withdrawals that may affect critical or depressed salmon stocks.

COMMENT
Does DOE consider that RCW 90.44.050RCW 90.44.250, and RCW 90.44.450 will require the owner of an exempt well to measure withdrawals and periodically report to DOE amounts withdrawn

RESPONSE
The provisions cited provide Ecology the discretion to measure ground water uses. The proposed rule retains this discretion.

COMMENT
If the owner of an exempt well is considered to have a water right and the exempt well is withdrawing water from waters that contain depressed or critical fish stock, will that owner be required to meter or measure water use from that well and/or report that use to DOE under the requirements of proposed WAC 173-173?

RESPONSE
Ecology must enforce the measurement of ground water uses that may affect critical or depressed salmon stocks. However, Ecology's ability to enforce measurement on exempt withdrawals is limited by the resources provided to it by the Legislature. At this time, Ecology does not have to resources to require the measurement of exempt withdrawals in any kind of systematic, comprehensive manner.

COMMENT
Will DOE require installation of measurement devices during installation of all new exempt wells? If so, how will that installation be verified?

RESPONSE
No.

COMMENT
If DOE has "no intention" of metering exempt withdrawals, can this exemption be articulated in the rule?

RESPONSE
Our full statement is that we currently have no intention of enforcing the measurement of exempt withdrawals. Nonetheless, Ecology lacks the authority to exempt small withdrawals from compliance with statutory law. The Thurston County Superior Court has ordered that Ecology must enforce the measurement of ground water uses that may affect surface waters containing critical or depressed salmon stocks. The dilemma here is that the department has been given a legal mandate, but not the resources to implement it.

COMMENT
At what point in time would DOE begin enforcing any metering/reporting requirements upon the owner of an exempt well?

RESPONSE
At this time, the department has no plans to enforce measurement or reporting requirements on exempt withdrawals.

COMMENT
How would DOE enforce WAC 173-173 with respect to an exempt well?

RESPONSE
At this time, the department has no plans to enforce measurement or reporting requirements on exempt withdrawals. Should those plans change in the future, Ecology could use a number of ways to enforce the measurement of exempt withdrawals, such as public education, formal notification, issuance of a compliance order or issuance of penalties for failure to comply.

COMMENT
DOE indicates in the CR-102 (notice of proposed rulemaking) that "data [collected under the measuring rule] will improve the Department's ability to make informed water management decisions, including determining whether water is available for appropriations and whether water users are in compliance with their water rights." Assessment of compliance with water rights includes verification that withdrawals and diversions do not exceed volumes permitted by the associated water right as well as identification of diversions/withdrawals that do not put the entirety of the appropriated volume to beneficial use. However, there are proposed changes to State law and DOE's administrative approach to water rights.

a) Will DOE use measurement data reported under the proposed rule to make changes to water rights immediately or would such actions be suspended pending proposed legislative changes and rulemaking?

RESPONSE
It is not possible to answer your question without understanding to which proposed changes you are referring. In any case, pending the actual enactment of such changes, Ecology is charged to enforce its laws and regulations as they are written. It also is unclear what you mean by "changes to water rights" when you inquire whether Ecology will "use measurement data reported under the proposed rule to make changes to water rights."

COMMENT
Is DOE considering any delegation of enforcement requirements under WAC 173-173 to any non-DOE entity?

RESPONSE
Not at this time.

COMMENT
DOE must provide an implementation plan when the rulemaking order is issued prior to adoption. The compliance schedule developed in conjunction with the proposed rule addresses implementation in 16 WRIAs identified as "fish critical" watersheds.

a) Can you provide a schedule of implementation after the initial 16 WRIA compliance schedule?
b) At what point in time does DOE expect that water users in the Skagit and Samish basins will be required to begin reporting water use under the provisions of WAC 173-173?

RESPONSE
At this point the department has not identified which locations it will be focusing its compliance efforts after it has fulfilled the compliance plan. The compliance plan will guide our efforts to the end of 2002.

COMMENT
The proposed rule requires measurement and reporting of water use under existing and new water rights (surface and ground water) in waters "in which the salmonid stock status is depressed or critical, as determined by the Washington State Department of Fish and Wildlife" (proposed WAC 173-173-020 2.a). RCW 90.03.360 describes, "diversion or withdrawal is from waters in which the salmonid stock status is depressed or critical" (emphasis added). However, proposed WAC 173-173-040 (2)(b) contains the language "depressed or critical fish stock" (emphasis added). This appears to be more restrictive language than the relevant RCW requires.

Will DOE consider changing this language to only reflect salmonid stocks?

RESPONSE
We have changed "fish stock" to "salmonid stock" in WAC 173-173-020(2)(a).

COMMENT
Can you clarify or provide reference to the criteria by which "depressed or critical" status is and will be determined?

RESPONSE
RCW 90.03.360 provides that Ecology consider whether salmonid stocks are critical or depressed "as determined by the Department of Fish and Wildlife." The Department identifies stocks which are critical or depressed in a Salmonid Stock Inventory (SaSI). Critical stocks are those that have declined to the point that the stocks are in danger of significant loss of genetic diversity, or are at risk of extinction. A depressed stock is one whose production is below expected levels, based on available habitat and natural variation in survival rates, but above where permanent damage is likely. For further information, please see: http://www.wa.gov/wdfw/fish/sassi/intro.htm.

COMMENT
The 1992 SASSI report lists the Skagit River as depressed for Coho. Does this finding require all (or part) of the Skagit Basin as being subject to the measuring provisions of WAC 173-173-040?

RESPONSE
Yes, because Skagit River coho are considered to be a depressed salmonid stock, the department is required to enforce measurement on new and existing diversions that will affect the surface waters containing that stock.

COMMENT
The Samish basin is not listed in the SASSI report as depressed or critical for salmon. Does this mean that new or existing ground water withdrawals from the Samish basin will not be required to measure or report those withdrawals?

RESPONSE
It means that enforcement of the measurement of ground water withdrawals from the Samish basin will be discretionary for Ecology.

COMMENT
Does the proposed WAC allow for ground water withdrawals to be either added to or eliminated from metering requirements based upon assessment by State Fish and Wildlife of the health of salmon stocks in subject watersheds?

RESPONSE
A change in the status of a salmonid stock from critical or depressed to a less threatened status would determine whether Ecology must enforce measurement for the water uses that affect that stock or whether enforcement of measurement would be a discretionary action for Ecology.

COMMENT
By what method will DOE determine that a ground water withdrawal could contain "any volume of water" that is "from waters containing depressed or critical fish stock

RESPONSE
Ecology may rely upon on a variety of analytical approaches to determine whether a ground water withdrawal affects, or is in continuity with, the waters containing depressed or critical fish stocks. For more information, please see the ***Report of the Technical Advisory Committee: Recommended Technical Methods for Evaluating the Effects of Ground-Water Withdrawals on Surface Water Quantity*** *available for download at: http://www.ecy.wa.gov/programs/wr/plan/hc.html*

COMMENT
What effect, if any, does DOE expect that the requirements and reported data from the proposed rule may have on designations for streams that are listed as low flow or closed to further appropriations?

RESPONSE
Information regarding actual water use based upon water use data reported to Ecology will be useful in determining water availability, which in turn will inform decisions whether certain streams should be closed, or stay closed, to further appropriation.

COMMENT
How do provisions of the proposed rule fit into either discussions of or relevance toward the ''one molecule theory'' of ground water/surface water continuity?

RESPONSE
The "one molecule theory" is a phrase used by some to characterize the argument that depriving an existing water user of even one molecule of water constitutes impairment of that user's water right.

The State Supreme Court has ruled that Ecology may not approve a request for a new water right if it will impair an existing right, even if that impairment is de minimis [Postema v. PCHB, et al., Citation pending, (2000)]. This rule will assist Ecology's determinations of impairment in that it will help us understand the extent of actual water use of existing water users and, thus, the extent to which water is available for further appropriation without impairing existing water rights.

COMMENT
Will data that is collected as a result of implementation of the proposed rule be used to support any requirements for mitigation from ground water withdrawals that are perceived to have an effect (even a de-minimus effect) on in-stream flow of a closed or low flow stream?

RESPONSE
The extent to which the department may consider mitigation of proposed withdrawals is governed by RCW 90.44.055, which provides,

> *The department shall, when evaluating an application for a water right or an amendment filed pursuant to RCW 90.44.050 or 90.44.100 that includes provision for any water impoundment or other resource management technique, take into consideration the benefits and costs, including environmental effects, of any water impoundment or other resource management technique that is included as a component of the application. The department's consideration shall extend to any increased water supply that results from the impoundment or other resource management technique, including but not limited to any recharge of ground water that may occur, as a means of making water available or otherwise offsetting the impact of the withdrawal of ground water proposed in the application for the water right or amendment in the same water resource inventory area. Provision for an impoundment or other resource management technique in an application shall be made solely at the discretion of the applicant and shall not be made by the department as a condition for approving an application that does not include such provision.*
>
> *This section does not lessen, enlarge, or modify the rights of any riparian owner, or any existing water right acquired by appropriation or otherwise.*
> *[1997 c 360 § 3; 1996 c 306 § 2.]*

To the extent water use data is relevant to a proposed withdrawal, then it is likely the department will consider that information in its discussions whether to authorize it.

COMMENTER

John Bowman, Lakehaven Utility District
Lakehaven Utility District Comments on Draft WAC 173-173 (Aug 2001)

COMMENT
Section 173-173-050, (2)(b):
Many water purveyors have multiple water sources in use. It would be extremely difficult to accurately describe the "place(s) of use" for each source. For water purveyors, the "place(s) of use" should be the purveyors water service area.

RESPONSE
Ecology will include language on this issue in technical guidance for the water measurement rule.

COMMENT
Section 173-173-050, (2)(f):
At what interval of time is the "maximum instantaneous quantity" defined? Perhaps this term should be added to the definition section, including a specified interval of time which defines "instantaneous". Are "snapshot" flow reading taken at the required recording frequency (shown in 173-173-060) sufficient? If not, how many flow rate measurements would someone have to make during the reporting period to capture the maximum instantaneous flow rate? Or are continuous data recording systems required to do this? What would be the legal tolerance for meeting the maximum instantaneous rate of withdrawal on the water right (some example methods might include +/- 10% of the listed instantaneous rate on the water right or average rate for 24 hours of operation can not exceed)?

RESPONSE
The language referring to "instantaneous" flow has been replaced with the term "maximum rate of diversion". The department will include language on this issue in technical guidance.

COMMENT
Section 173-173-050, (4):
From a water purveyor or stand point, who must sign or "attest" that the data provided is true and correct? The person who reads the meter or the Water Distribution Manager as registered with the Department of Health?

RESPONSE
The responsible party or its designee will be responsible for attesting to the validity of the information. In general, the department expects that someone in a management position would attest to the data correctness.

COMMENT
Section 173-173-090, (6):
Well pumps often have a pump control valve that initially purges water form the well before it goes through the meter and into the water system. While the actually quantity of water that is purged is relativity small, these turnouts are not necessarily "small" (designed to handle the entire instantaneous flow rate).

RESPONSE
The intent of this language is to accommodate de minimis effects; the department's concern is more with the quantity of the effect than the physical size of the turnout.

COMMENT
Section 173-173-100, (5):

Suggest rewording this section to read "The department may require that the measuring device be capable of indicating instantaneous flow rates or that other recording devices be used to capture the instantaneous flow rate.

RESPONSE
The department will include language on this issue in technical guidance. Remote SCADA recorders as well as actual measuring "devices" would be acceptable as long as they are operating correctly.

COMMENT
Section 173-173-100, (6):
Does this section mean that DOE will need to formally "approve" of a meter selection on a given source before installation?

RESPONSE
In general, the department will not require prior approval of a meter selection before installation. The department will discuss the suitability of measuring devices with any responsible party if the party desires.

The department expects that responsible parties will select measuring devices that will achieve the performance-oriented requirements of this chapter. The rule also provides that they shall rely upon standard industry reference works such as the American Water Works Association standards and information from the manufacturer. The department does reserve the authority to approve alternative methods of measurement and use of the power consumption method. The department also expects to produce technical guidance in the future that will assist responsible parties in determining an appropriate measuring device for their situation.

COMMENT
Section 173-173-180:
How long do these records need to be retained? It would seem that only measurements for the official reporting requirements need to be preserved. Data specifically gathered for investigative purposes such as water system modeling or facility troubleshooting need not be retained to the same degree.

When using a data logger or telemetry systems, data is often recorded at very small time intervals and can take up a lot of file or memory space. It would seem reasonable to allow data to be purged to a larger time interval. As an example, if data is recorded every minute, it would seem reasonable to only save the daily production total and maximum or average flow rate reading for that day. This would vastly reduce the amount of data that would need to be retained.

RESPONSE
The department concurs that only the measurements for official reporting need to be retained for the purposes of this rule. The utility has the discretion on the length of time to keep investigative or operational data not related to this rule. The rule language regarding retention of records has been changed to provide that records should be retained as long as practicable.

COMMENTER

Gary Sorensen, Skagit County Public Works

COMMENT
Ecology has indicated (news release 01-147) that they "have no intention of requiring people with small, individual water wells to measure their use" and "measuring water use from individual exempt withdrawals is NOT part of the plan."

However, the proposed rule text does not include any provisions for this exemption, and our reading suggest that strict application of the rule could require exempt users to install measuring devices and report measurements under the conditions articulated in the rule.

Therefore, can Ecology articulate their expectations/approaches to exempt wells within the Rule text itself?

RESPONSE
Please see our response to concerns about the applicability of the rule to exempt withdrawals on page 21.

COMMENT
Ecology indicates in the notice of proposed rulemaking that "data will improve the department's ability to make informed water management decisions, including determining whether water is available for appropriation and whether water users are in compliance with their water rights."

Current state law and case law reflect the "use it or lose it" approach. If water is not put to beneficial use, the right to that water may be forfeit. However, there are proposed changes to state law and Ecology's administrative approach to water rights.

Therefore, will Ecology use measurement data reported under the proposed rule to make changes to water rights immediately or would such actions be suspended pending proposed legislative changes and rulemaking?

RESPONSE
We understand your question to be addressing the relationship of water use data and how that data might relate to the relinquishment of water rights. Relinquishment is a function of statute [Chapter 90.14 RCW]. When a water right has not been exercised without sufficient cause for five years or more, the right to that water is said to have been relinquished and the department is directed to issue an order of relinquishment. The determination whether relinquishment has occurred is based upon a consideration of factors in addition to water use, such as whether sufficient cause exists for non-use of water. We anticipate that Ecology will continue to exercise its authority under this statute as it is enacted until such time as the statute changes.

COMMENT
The proposed rule requires measurement and reporting of water use under existing and new water rights (surface and ground water) in waters "in which the salmonid stock status is depressed or critical, as determined by the Washington Department of Fish and Wildlife." Can Ecology clarify or provide reference to the criteria by which "depressed or critical" status is and will be determined? Is that status based on 1992 SASSI results or on sporadic, site specific evaluations by Fish and Wildlife?

RESPONSE
RCW 90.03.360 provides that Ecology consider whether salmonid stocks are critical or depressed "as determined by the Department of Fish and Wildlife." The Department identifies stocks which are critical or depressed in a Salmonid Stock Inventory (SaSI), formerly known as the Salmon and Steelhead Stock Inventory (SASSI). Critical stocks are those that have declined to the point that the stocks are in danger of significant loss of genetic diversity, or are at risk of extinction. A depressed stock is one whose production is below expected levels, based on available habitat and natural variation in survival rates, but above where permanent damage is likely. For further information, please see: http://www.wa.gov/wdfw/fish/sassi/intro.htm.

COMMENTER

Marguerite A. Glover

COMMENT
The Sequim – Dungeness Valley is fortunate to have had some historic record keeping, from stream gauges on the Dungeness River, and a few of the other streams. Plus, USGS has done some studies and reports, from the 70's, (Drost), (& Noble) up to the latest in 1999 (Thomas, Goodman, and Olsen).

I sat on the Sequim Bay Watershed Management Team, the Dungeness River Management Team (as an alternate), and the Dungeness - Quilcene Regional Planning Group (Business Caucus). I was also part of the County's Ground water Work Group.

We received and reviewed many hydrogeologic studies, reports, and hypotheses. Our County agreed with the USGS reporting of three aquifers and two aquitards in the Sequim – Dungeness Valley. ("There are three aquifers, two confining beds, and a lower unit of undifferentiated deposits. A bedrock unit at the bottom is considered the base of the ground water system." – USGS, Thomas, Goodman, Olsen, 1999, page 12)

Our Olympic Mountains are the shortest ones in the contiguous United States to have snow on them all year long. The reason they do is because they are "younger" than the Cascades. They still have glaciers on them. These glaciers melt every year, and supply ground water to the Valley, even in a low rainfall year. The Valley benefits from the inability of the foothills to absorb the water. There is no identifiable aquifer throughout the foothills. The hard soil and

rock will keep ground water only in its fissures. Long ago, our county Commissioners recognized that the soils were poor for on-site sewage disposal systems, and that good ground water is spotty. This is why most of the foothills were zoned one house per five acres, one house per twenty acres, and one house per eighty acres.

The pressure of water flowing downhill from the foothills into the Valley is so great that there are creeks flowing up in fields (such as Casselary Creek), and proceeding to the Strait. There are artesian wells in Jamestown. There is even a U.S. Government well 700' deep, on the Dungeness Spit, which produces fresh water. Again, the 1999 USGS report states that; "in the southern part of the study area, vertical flow between aquifers is mostly downward, and in the northern part, flow is mostly upward." Page 112

USGS estimated that, in 1996, wells in the study area, had withdrawals of ground water of .6in. or 3,740 acre feet, after calculating the recharge provided from septic systems. (page112)

Domestic, exempt wells have little effect on our streams and rivers, when compared to irrigation of farms and actual withdrawals from the rivers in streams.

In fact, the County Ground water Group, predicted that only 1.1 cubic feet per second, at the very worst case scenario, would be removed from instream flows in the Dungeness River, should all parcels of land developable be developed. In reality, when agricultural land is removed from irrigation and converted to domestic water use, less water is used.

Ecology has long stated that it feels that our domestic wells impact the Dungeness River. I feel that if Ecology could obtain enough money and staff, they would require individual wells to be metered, and water use to be reported. DOE knows about how much water each family uses. It is an unnecessary use of our tax dollars to try to meter and monitor individual well use.

Your new section WAC 173-173-040 states that "the requirement of this chapter apply to the owner or owners of any water diversion and to the department." Emphasis added. Furthermore, it applies to: new and existing water rights where the diversion or withdrawal of any volume of water is from waters containing depressed or critical fish stock…" Since Ecology feels that our individual wells impact the Dungeness River, this draft WAC would apply to exempt wells.

I completely object to this. You cannot just assume that no one in the State has enough water.

RESPONSE
Thank you for the information regarding ground water in the Dungeness Basin. We have provided it to Cynthia Nelson, Ecology's representative to the Dungeness watershed planning effort. Please our discussion on the applicability of the rule to exempt wells on page 21.

COMMENTER

Jack and Joanne Campbell

COMMENT
We, Jack and Joann Campbell, deplore your idea of invading our private property without our permission. This includes anyone or any device having to do with our use. We have used and maintained this well for over 30 years. We do not want any intrusion upon our private water well upon our private property – ever. Please do not take away any more of our independent rights

RESPONSE
Thank you for your comment. The department is obligated to enforce the measurement law when your use would affect critical or depressed salmon stocks. Should the department ever enforce water measurement on your property and need to access your property to determine compliance, we will not access your property if you have refused permission. If you have refused permission, the department may seek to obtain a legal warrant.

COMMENTER

Pat Boss, Washington State Potato Commission

COMMENT
On behalf of the Washington State Potato Commission (WSPC), .I would like to submit the following comments on the Draft Rule "Requirements for Measuring and Reporting Water Use" (Chapter 173 WAC):

General Concerns by the WSPC
The WSPC believes these rules are fairly complex and have broad application. The Department of Ecology may want to review the draft for clarity to insure that it provides sufficient notice to responsible parties of their obligations under this rule. This is particularly important in light of the enforcement authority of the department regarding requirements for measuring and reporting and record retention.

The rule incorporates reporting requirements for some water users as required per court order. If these orders are withdrawn, revised or supplemented, how will the Department provide adequate notice under the rule to ensure compliance?

RESPONSE
Your comments address an earlier working draft of the rule, not the formal draft that was published in Washington State Register on August 15, 2001 (Telephone Conversation between Jeff Marti, Department of Ecology and Pat Boss, Washington State Potato Commission on October 19, 2001).

The court order doesn't require water users to report their water use. It does require Ecology to enforce measurement in certain circumstances. Whether to

require reporting in addition to measurement is a discretionary decision for Ecology. To ensure compliance, we will likely rely on a various means of notification, including formal administrative orders, letters, phone calls, meetings and more general forms of public education.

COMMENT
(2)(c) Does this authority extend to all, ground water withdrawals or only to new withdrawals?

RESPONSE
Section 2(c) of the preliminary draft of the rule is now proposed section WAC 173-173-020(3). This section describes the authority provided by statute to the department to request that ground water withdrawals be measured. We believe that this authority extends to both existing and new withdrawals.

COMMENT
(4) (a) There is no reference to application of the rule to ground water withdrawals. The rule should specify the department's enforcement authority and intentions regarding ground water withdrawals, existing and new.

RESPONSE
This section in the preliminary draft of the rule has been changed to the language in WAC 173-173-040.

COMMENT
(6)(C) These reporting requirements apply "when the department so requires." Does this caveat only apply to open basins in the first category or will the department be applying its discretion to the other open basin and closed or SASI basins as well?

RESPONSE
We believe you are referring to Section 6(e) and (f) of the preliminary draft of the rule. In the preliminary draft of the rule, the department considered establishing different reporting requirements for open, closed and SASI basins and for surface and ground water as well. In the formal draft, the department changed these requirements to be uniform for all types of waterbodies. Those requirements are at WAC 173-173-060.

COMMENT
(8)(a) The language implies that withdrawals or diversions are not allowed "unless the measuring device and facilities are in proper operating condition": If a responsible party discovers a malfunctioning measuring device or meter,- can it continue withdrawal or diversion between time of discovery and repair or must withdrawal or diversion cease during this time?

RESPONSE
This language found in the preliminary draft has been modified to allow continued diversion or withdrawal provided certain conditions are met:.

WAC 173-173-090 What are the general requirements for measuring devices? (1) No withdrawal or diversion of water shall be made unless the measuring devices and facilities are in proper operating condition, except when:
(a) measuring device or facility is being repaired according to the requirements of subsection (2) or (3) of this section; and
(b) The responsible party uses a substitute measuring device or other method to measure the diversion or withdrawal or to provide a reasonable estimate thereof.
(2) Upon discovery of a malfunctioning measuring device or facility, the responsible party shall repair the device or facility and make them operable as soon as possible.
(3) The department may order that a measuring device or facility be repaired or replaced within a specified time period.

COMMENT
(8)(g) Change to "authorized employees of the department shall have REASONABLE access to the measuring device and facilities,"

RESPONSE
We have deleted this subsection.

COMMENT
9) (c) (ii) What is the purpose of recording an "instantaneous discharge?" How would such a measurement be considered in the compliance and monitoring schemes outlined in the reporting requirements tables?

RESPONSE
The purpose of recording instantaneous or maximum instantaneous discharge is to determine compliance with the maximum instantaneous quantities specified on a water right.

COMMENT
13) (1) and (2) -(a) and (b) this. section should be revised to make it clear that the department shall only issues orders if it determines that the measuring facilities have not been repaired and returned, to operation "as soon as possible upon discovery of a malfunctioning or damaged facility.

RESPONSE
This language has been revised as WAC 173-173-090. We have incorporated your suggestion and have revised WAC 173-173-090(3) to read, "If a responsible party does not comply with WAC 173-173-090)2, the department may order that a measuring device or facility be repaired or replaced within a specified time period."

COMMENT
(16) It is difficult to retain records indefinitely. The Department of Ecology should specify a reasonable period of records retention

RESPONSE
This language now appears as WAC 173-173-180. We have revised this language to provide that records should be keep as long as is practicable.

COMMENT
For purposes of public notice the rule should specify the amount' of civil penalties which may be imposed under RCW 90.03.600.

RESPONSE
We prefer to reference that statute by section number rather than repeating its specific provisions in the rule. This makes it less likely that the rule would have to be revised in the event of a change in the statute authorizing penalties for violation of the water code.

COMMENT
(19) If a party is not subject to an order but is subject to the rule requirements, can it appeal the application of the rule to its water use measuring operations?

RESPONSE
Any person may appeal an administrative rule in accordance with the Administrative Procedures Act.

COMMENTER

The Mountaineers

COMMENT
The Mountaineers supports the proposed rule to repeal and replace Chapter 508-64 WAC with a new WAC Chapter 173-173. The proposal will establish requirements for measuring and reporting water use. We feel this is important for the needed accountability of water users and for the health of our rivers, the health of our wildlife, and for our water supply.

The Mountaineers is one of the largest conservation and recreation organizations in the Northwest, with nearly 15,000 members. Our members kayak, sail, climb, and hike the great outdoors. Since 1906, we have been strong advocates for the conservation of the Northwest.

The Mountaineers have long supported water being metered by all users — residential, industrial, commercial, and agricultural. We understand the amount of water withdrawn, both from surface water and ground water, is measured. This new rule describes standards of acceptability for devices and methods used to determine the rate and volume of water diversions

and withdrawals; the proposed rule also establishes requirements for reporting the volume and rate of diversions and withdrawals.

It is also understood metering the actual use of the withdrawn water has not necessarily been customary for all entities. It is essential to require all water going into agricultural, commercial, industrial, and residential use to be metered and reported. It is essential to know how much water is returned, after use, to instream flows and ground water restoration

Although water trust rights consider water, when withdrawn, to be a private resource, water, is in fact, a public resource. It is necessary for the public, through the Department of Ecology, to know just how efficient or inefficient water users are.

We all know water is a limited resource. It is a resource required by everyone as well as by fish and wildlife.

The Mountaineers urge the Department of Ecology to require metering of water at all stages --when withdrawn, when and how much was used, and when and how much is returned to both surface and ground waters.

RESPONSE
Thank you for your comment. We agree that return flows are necessary to quantify the actual impacts of diversions on instream flows and ground water. This rule, as does the statute (RCW 90.03.360) authorizing it, focuses on the measurement of the diversions and withdrawals themselves and does not address the measurement of return flows.

COMMENTER

William D. Gray, Bureau of Reclamation

COMMENT:
The Washington State Department of Ecology requires water measurement for all new surface water permits for existing surface diversions exceeding 1 cubic foot per second and for new and existing water rights where the diversion or withdrawal of any volume of water is from designated critical fish habitat. Ecology has explicitly stated that accurate data gathered under the State Water Measurement Rule (Rule) will be used to evaluate water use relative to water rights for water budgeting and management, for the detection of ground water mining, and for water rights conflict resolution. The Rule applies to both piped and open channel flow diversion systems.

The Bureau of Reclamation, a Federal agency that has constructed and operated agricultural irrigation distribution systems for nearly 100 years in 17 Western states and for more than 90 years within the State of Washington, has extensive experience in metering and measurement of water flow.

Reclamation has two primary concerns with the proposed changes to the State Water Measurement Rule.

The first is that the average water user has insufficient knowledge of water measurement instrumentation, operation and maintenance of those instruments, and data management needed to properly select a suitable location and to identify measurement methods and the associated equipment necessary for open channel flow conditions. Affected water users will be required to site, install, calibrate, operate and maintain equipment, and record and regularly transmit data to Ecology. Ecology has identified Reclamation's Water Measurement Manual, written specifically for open channel flow measurement in irrigation projects, as one primary source of information and guidance. Installation and operational guidance which could be provided by instrument manufacturers is another primary information resource available to individuals required to measure diverted water. The Groundwater Manual is another Reclamation document which can be recommended as a technical resource guide for water users who are required to monitor and report ground water pumping activities.

The accuracy of the water diversion data submitted to Ecology could be significantly improved through development and attendance at an area water measurement workshop by those required to report water use data. These workshops could guide attendees through site and measurement method selection, instrument operation, calibration, maintenance, and reporting procedures. One scenario might include having a workshop with a general technical overview of water measurement science followed by breaking into groups of surface and ground water users for source-type technical presentations and discussion. In addition, they could have site-specific practical guidance and demonstrations and end with a general Q&A session.

RESPONSE
Thank you for your comment and the recommendation regarding the Groundwater Manual. We agree that successful implementation of the rule will greatly depend on the ability of water users to manage and maintain their measurement system. We agree that technical workshops to educate users also would be very beneficial to this end.

COMMENT
A second group of associated concerns includes the following discussion. Open channel flow measurement has practical constraints for day-to-day data collection. Accuracy of measurements, obtained via mechanical flow metering under "good" hydraulic conditions is typically reported as + or - a percentage of the measured flow quantity and not of the "actual flow" as is stated in the Rule. Note that "good" hydraulic conditions refers to a device that is perfectly installed, has an unobstructed hydraulic flow, and has been maintained according to manufacturer's directives. Metering data is an approximation of "actual flow" at a specific point and time and is, thus, a relative value that can be compared to other flow data. Aquatic weed and algae growth and sediment entrapment are common environmental factors that can seriously impair either operation or measurement device reliability (through changes in channel cross sectional area) in open channel flow systems. In a metering and measurement workshop, Ecology should consider the inclusion of discussion and demonstration of the concept of error types including total and relative errors such as environmental instrument impairment, calibration and operator errors, and reporting of types of allowable error.

RESPONSE
Accuracy is defined in the Bureau of Reclamation's Water Measurement Manual as "the degree of conformance of a measurement to a standard or true value". In the strictest sense, the exact true value is never known, and technicians rely on a closely calibrated system or meter to serve as the most accurate estimate of "true" value. Ecology will include language in technical guidance that provides more detail on appropriate accuracy standards.

COMMENT
An associated concern is the type of data collected and its intended application for estimating water use. Water diversion and water consumption (consumptive use) are two very different water use figures. Water diversion data fails to account for return flow, ground water contributions, and transport losses within systems.

RESPONSE
In our rule, water use is meant to be generally interchangeable with the amount of water diverted, withdrawn, stored and used.

COMMENTER

Washington Public Utilities Association

COMMENT
Thanks for the opportunity to comment on the proposed Water Measuring Rule, Chapter 173-173 WAC. After reviewing the proposed regulation and the relevant statutes, we have several comments and concerns. Our main concern is that the proposed rule conflicts with the statutory authority cited for it. This conflict arises primarily in the rule's requirements for measuring and reporting of water use, as well as several other aspects of water conveyance and delivery, that are not supported by statute.

PUDs have made a strong commitment to the metering of their water sources and service connections. They support water metering as a valuable tool in water resource management and conservation. But we also want to be sure that any regulatory requirements proposed by Ecology are clearly supported in statute and are clear in both their intent and practicability. We are concerned that imposing requirements for measuring and reporting information about water use might both exceed Ecology's statutory authority and create problems with practical implementation that have not been thoroughly considered.

Our specific concerns:

The proposed title for this chapter contains an error which is repeated throughout, and which affects the application of the regulation. The title is "Requirements for Measuring and Reporting Water Use" (emphasis added). The applicable statutes cited in the regulation as authority for its adoption relate only to measurement of water diversion or withdrawal, and not to measurement or metering of water use. Use of this misnomer throughout the regulation expands its application and shifts its emphasis well beyond the clear purpose and intent of the authorizing laws. This incorrect direction is set with the opening sentence, which describes the purpose of the rule as establishing standards for recording and reporting water use data. This is not the proper application of the rule. It is not authorized by the referenced statute, RCW 90.03.360.

RESPONSE
The term "water use", as used in this rule, is meant to be generally interchangeable – not exclusively, however -- with the quantity of water which is diverted, withdrawn and stored. It also, however, may be interpreted, in the case of ground water withdrawals, to provide for the quantification of "water use." Please note that RCW 90.44.250 provides the following:

> *The department is hereby authorized to make such investigations as may be necessary to determine the location, extent, depth, volume, and flow of all ground waters within the state and in making such examination, hereby is authorized and directed to cooperate with the federal government, with any county or municipal corporation, or any person, firm, association or corporation, and upon such terms as may seem appropriate to it.*
>
> *In connection with such investigation, the department from time to time may require reports from each ground water appropriator as to the amount of public ground water being withdrawn and as to <u>the manner and extent of the beneficial use.</u> Such reports shall be in a form prescribed by the department. [Emphasis added].*

COMMENT
WAC 173-173-030 (1) refers to a device to measure the volume or flow rate of water which is "diverted, withdrawn, delivered, received, transported, conveyed, pumped, recharged, stored, recovered, or used." Except for the words in bold italic type, the listed activities are outside the applicable statutes, and each does not require separate metering.

RESPONSE
We have revised this definition to the following: "...a device to measure the volume or flow rate of water that is diverted, withdrawn, stored or used." We have retained the term "used" to be consistent with the authority granted in RCW 90.44.250, which provides that, "the department from time to time may require reports from each ground water appropriator as to the amount of public ground water being withdrawn and as to the manner and extent of the beneficial use."

COMMENT
WAC 173-173-060. Same comments as above. Also note that the word "users" in (2) should instead be "responsible parties."

RESPONSE
We have revised this section to state "responsible parties" instead of "users."

COMMENT
WAC 173-173-070 and -210. Replace "use" with "withdrawal or diversion."

RESPONSE
We have retained the language as proposed. As noted in the above response, for the purposes of this rule, "use" is considered to be generally interchangeable with "diverted, withdrawn and stored." In addition, RCW 90.44.450 provides that, "the department from time to time may require reports from ground water appropriator as to the amount of public ground water being withdrawn and as to the manner and extent of the beneficial use." It therefore is appropriate to retain the term "use" in this section.

COMMENTER

Tom Buchholtz, Department of Natural Resources

COMMENT
WAC 173-173-050(2)(c): DNR is the holder of more than 100 permits that would be impacted by this WAC. It would be very difficult and time consuming to determine the county parcel numbers for all permits. DNR is willing to note the legal descriptions as noted on the permits.

RESPONSE
The purpose of requiring county parcel information is to enable the department to determine current ownership of the land appurtenant to the water right, as recorded at the county assessor's office.

COMMENT
WAC 173-173-050 (2) (g): Many existing water meters are still functional, but model and serial numbers are not available. DNR proposes that an exception to this requirement be made for existing meters.

RESPONSE
The existing language gives Ecology the authority to require the items listed in section 050, but does not stipulate that the agency will require every piece of information for every responsible party.

COMMENT
WAC 173-173-050 (2) (h): Many existing water meters are still functional, but have not been calibrated since leaving the factory. DNR proposes that an exception to this requirement be made for existing meters.

RESPONSE
It is Ecology's expectation that existing meters that have not yet been calibrated will be calibrated according to the manufacturer's recommendations. While a meter may be functional, it may still be under- or over-registering and not providing accurate data.

COMMENT
WAC 173-173-060(2) It would be extremely difficult and in some cases impossible for DNR lessees to record daily water use. Keeping daily or weekly records is a huge workload, and for what purpose? DNR would support monthly reporting for all levels of water withdrawal.

DNR is supportive of an annual reporting, but would recommend that all levels of water withdrawal be reported annually by the same date to reduce serious confusion with the number of different permits DNR is dealing with.

RESPONSE
Frequency of recording is dependent on the size of the diversion. Several parties commented on the frequency of reporting believing that daily or daily and weekly monitoring was too frequent and unnecessary. Ecology has altered the rule to delete the requirement for daily recording for diversions above a certain size. Ecology does retain the authority to require more frequent monitoring where it is needed.

Ecology changed the reporting date so that all reports are due on January 31 of each calendar to simplify reporting.

COMMENT
WAC 173-173-110(4) Irrigation system pump discharge components are complex, and are therefore not easy to disassemble. This portion of the WAC is impossible to comply with.

RESPONSE
Language requiring meter removal has been removed and the rule references the manufacturer's requirements for proper installation, maintenance, testing and calibration.

COMMENT
WAC 173-173-120(2): In order to meet this requirement one must be able to determine if the meter is obviously over- or under-registering. This would be very difficult and could be expensive as well. The normal situation is that the meter either is working, or not working. The meter would need to be repaired or replaced if not working.

The concept of shop calibration is a very expensive option, as this would normally entail sending the meter back to the factory. A more prudent option is to perform a diagnostic and repair the item(s) needing to be replaced, or replace the meter totally if repair isn't an option.

RESPONSE
This language has been changed to provide simply that if the responsible party knows the meter is over or under registering, the meter should be repaired and/or calibrated.

The rule requires calibration as specified by the manufacturer. If the manufacturer allows either field or shop calibration, the rule give the option of conducting either one. Inspection and calibration is necessary to ensure long term accuracy of any measuring device.

COMMENT
WAC 173-173-160**:** DNR is of the opinion that power consumption is not an accurate means of determining flow measurements. Irrigation is a dynamic process that can significantly modify the efficiencies of both the well being pumped and the pump itself. A pump test is only a snapshot in time, and can not accurately indicate the flows that take place under different conditions and time periods. Power consumption should therefore have very limited use in flow measurement.

The DNR is supportive of including in this section of the WAC other means of measuring the known flows of irrigation systems. For example, center pivots deliver a designated rate of flow at a given pressure. That, along with the hour meter reading can measure the total volume of water applied over a period of time.

RESPONSE
Every measurement technique has inherent inaccuracies. Some irrigation systems deliver relatively constant flow. Others, such as those with falling ground water levels will deliver decreasing flow over time.

The department believes the "hour-meter" method of measuring flows would be acceptable as an alternative method, as provided in section 170.

COMMENT
WAC 173-173-170 (2): The requirement that the alternative device and its installation be certified by a professional engineer is unrealistic. There are many other irrigation professionals that are more than qualified to determine what measuring device or system will accurately measure and record flows**.**

RESPONSE
Several parties commented that professionals other than engineers are more qualified to evaluate measurement devices. We have revised this section to provide that other qualified persons acceptable to the department may certify the adequacy of alternative methods.

COMMENT
WAC 173-173-190: DNR feels that it is the responsibility of the Washington State Department of Fish and Wildlife to determine the status of fish screens beyond the requirement under proposed WAC 173-173-050 (2) (k) to report whether a screen is in place or not.

RESPONSE
RCW 90.03.360 requires the department of ecology to notify the department of fish and wildlife as to the status of fish screens associated with diversions. This is the basis of the requirement in the rule.

COMMENTER

Marcia Newlands, Heller Ehrman, representing Goldendale Aluminum Company

COMMENT
WAC 173-173-050(2)(f):
Replacing the phrase "maximum instantaneous quantity" with "instantaneous quantity" or "rate" will provide consistency with section 173-173-100 (5). The term "maximum instantaneous quantity" is not defined, whereas "instantaneous quantity" is an accepted term of art with respect to water usage.

RESPONSE
We have revised this subsection to read "flow rate" instead of maximum instantaneous quantity.

COMMENT
WAC 173-173-060 (1):
Deleting or clarifying the use of the term "maximum" with regard to instantaneous discharge will make the reporting requirement more manageable for the majority of water rights holders. Requiring the determination of "maximum" instantaneous rate over the recording period would require all users to install an automated data collection system (e.g., flow meter and data logger) on all water diversions to capture accurately the peak flow during the period. This would represent a substantial investment for most users, one that may not be balanced by an equivalent benefit.

Many water rights incorporate both an instantaneous demand limit and a monitoring protocol that, as a practical matter, do not require instantaneous measurement. If you change the protocol after the fact, the effect will be to require a reduction in water consumption by facilities that have relied on their existing water right, sometimes for decades. The proposed rule should not

supersede the terms of existing water rights and permits where recording frequency and reporting requirements are specified. Deleting the final phrase in this subsection, "…until directed to modify the manner in which they report their water use by the department," will prevent this inequitable, and potentially illegal, taking of water rights.

RESPONSE
Responsible parties who already measure and report according to the terms of an existing water right will be expected to abide by those terms until directed to do otherwise by the department. The department believes that RCW 90.03.360 provides the authority to amend the measuring and reporting conditions on existing water rights.

COMMENT
WAC 173-173-060 (2)
The chart in this subsection sets our a recording frequency that is based on an average diversion rate. It would be more appropriate to establish the recording frequency on a basis that provides sufficient data to quantify annual use as well and captures any notable variations in use and rate during the year. The recording frequency as currently proposed is excessive relative to the typical time interval over which changes in the rate of use and quantity of consumption occur for the majority of water users. We would recommend reducing the reporting frequency to quarterly for small users (less than 100 gpm) and monthly for all larger water users, to be more consistent with the time period over which changes in water use are generally observed. Variation in the rate or incremental volume of water use over a given time interval for most water users is generally related to seasonal variations (e.g., temperature and amount of precipitation), which is captured by monthly reporting.

Section -080(1) already authorizes Ecology to modify reporting requirements. This provides a more effective mechanism for applying more stringent data recording requirements to a limited number of specific users rather than across the majority of users.

The table of reporting requirements presented in this section also uses the term "maximum" for describing instantaneous flow, without adequately defining its measure. We would recommend replacing "maximum instantaneous flow" with "instantaneous flow" and defining the term and its measure under section 173-173-100.

RESPONSE
We have eliminated the requirement for any size diversion to be recorded daily. Also, we have replaced "maximum instantaneous flow" with "maximum rate of diversion."

COMMENT
WAC 173-173-100 (5):
This subsection as written is inconsistent with language used in prior sections requiring recording of instantaneous flows. We suggest revising WAC 173-173-100(5) as follows: "The department may require that the measuring device be capable of indicating instantaneous discharge. Where a water right specifies a maximum instantaneous flow condition, Ecology will accept estimates of instantaneous discharge calculated when the system is under maximum demand."

RESPONSE
We have added new language to this section allowing responsible parties to determine the maximum rate of discharge manually if a measuring device capable of indicating maximum flow is not installed.

COMMENTER

Darryll Olsen, Columbia Snake River Irrigators Association

[Mr. Olsen provided a number of recommended changes to the language of the rule, which are shown below. His recommended new language is underlined and the language he recommended to be stricken is in strike-out font. His comments were directed at the preliminary draft of the rule and not the formal draft].

COMMENT
~~(iii)~~The ~~county parcel identification number for the point(s) of diversion or withdrawal, and place(s) of use or area served by the diversion or withdrawal~~ legal identification of the point of diversion or withdrawal and place of use, as indicated within the applied water right, provided that municipalities, public water supply systems and irrigation districts shall not be required to provide parcel identification numbers for secondary users or customers.

RESPONSE
The purpose of requiring county parcel information is to enable the department to determine current ownership of the land appurtenant to the water right, as recorded at the county assessor's office.

COMMENT
~~(vi)The make, model and serial number of the measuring device(s) and any separable counting units;~~

RESPONSE
Language has been added at section 175 that allows a water user to request a variance from reporting and technical requirements in the rule. Some meters may not have some of this data available.

COMMENT

~~Whether the intake structure for the diversion or withdrawal has a screen or screens installed to prevent the entry of fish into the diversion works or pump facilities.~~ (NOTE: the WDFW already performs this function.

RESPONSE

We are aware that that WDFW is actively engaged in fish screening efforts. The reason we included this language in the rule is because RCW 90.03.360 requires the department the notify WDFW of the status of fish screens associated with diversions. The department will ask responsible parties whether a fish screen exists and share that information with WDFW.

COMMENT

~~(9)~~What are the specific requirements for meters for pressure systems?

~~(a)~~At any rate of flow measured by the meter, the meter itself shall be rated by the manufacturer to register not less than 85~~95~~ percent, nor more than 115~~05~~ percent, of the water actually passing through the meter.

~~(b)~~At any rate of flow measured by the measuring system; i.e. meter plus any secondary equipment such as data recorders; the system shall register not less than ~~90~~85 percent, nor more than 11~~0~~15 percent, of the water actually passing through the system.

~~The department may modify the required degree of measurement precision when it determines that a different degree of measurement precision is appropriate for the purpose for which the data is being collected. A responsible party may request a change in the default accuracy listed in (a) and (b) above and the department shall make a determination if the change is appropriate. All such requests or any department determinations concerning a change to the default accuracy shall be in writing.~~

RESPONSE

Ecology believes that allowing modifications of existing requirements will be needed in some situations and will retain the authority to modify accuracy requirements. Variance language has been consolidated in WAC 173-173-175.

COMMENT

~~(10)~~What are the installation requirements for meters on pressure systems?

~~(a)~~Meters required under this rule shall meet the following installation requirements:

~~(b)~~The meter shall be installed in accordance with manufacturer specifications.

~~(c)~~There shall be a full pipe of water at all times when water is being withdrawn

~~(d)~~The meter shall not be installed in a manner that creates an uneven velocity profile. Straight sections of pipe before and after the meter and/or straightening vanes shall be used to provide even flow through the meter as necessary

~~(e)Meters shall be installed in such a manner as to allow for easy removal and testing of the meter in accordance with the manufacturer's specifications.~~

RESPONSE

Language requiring the ability to remove the meter for testing and calibration has been deleted. Several commenters pointed out that some meters are so large that "easy removal" is not feasible. Requirement to test the metering in accordance with manufacturer's specifications has been retained in order to assure long term accuracy of data collection.

COMMENT

What are the operation and maintenance requirements for meters on pressure systems?

~~(a)~~Meters shall be inspected and maintained as needed to ensure adequate performance, as specified by the manufactuer. ~~specified by the manufacturer, or every year, whichever is more frequent~~

~~(b)~~Meters shall be field or shop calibrated: as needed to ensure adequate perfomance. ~~specified by the manufacturer or every three years, whichever is more frequent. Meters shall also be field or shop calibrated if they are obviously over or under registering. For certain non-mechanical meters, system diagnostics may substitute for physical calibration of the meter.~~

RESPONSE

Language has been altered to require that meters be inspected, maintained and calibration according to the manufacturer's specifications. Specific time periods have been deleted.

COMMENT

~~(15)~~Under what conditions are indirect measurements of flow allowed?

~~(a)~~Use of power consumption data may be substituted for more direct flow measurement methods when ~~it is impractical to install a meter and~~ the conditions below are met:

~~(i)~~Use of the method is approved in writing by the department;

~~(ii)~~A power meter is dedicated to one diversion point ~~pump~~ only; and,

RESPONSE

Ecology does believe that use of indirect methods of water use measurement will be appropriate in certain situations. Ecology's primary concerns are accuracy of the data, compiling the data from users in the least costly way (i.e. efficient use of state staff time and resources) and minimizing cost of measurement for users. Use of the power consumption method will require additional time on the part of state staff. Hour meters will also not reflect changes in seasonal pumping conditions. Therefore, power consumption data may be used if several conditions are meet. Two of the conditions are: that installation of a meter is unduly burdensome to a user and pumping conditions remain constant or near constant.

Your comment regarding the dedication of the meter to one diversion point only (rather than pump) is noted and language in the rule has been changed to reflect this concept.

COMMENT

Use of gpm consumption data may be substituted for more direct flow measurement methods when the conditions below are met:
Gpm data can be measured based on fixed pump performance or system output levels previously measured,
System psi readings with precalibrated water application devices;
Or other measures of system gpm based on precalibrated readings or engineering estimates.

RESPONSE

Ecology believes that the use of indirect methods to measure flow rate and volumes is appropriate in a number of situations. One such technique that is suggested here is the use of pressurized system data, including an hour timer and the knowledge of the system flow rate to measure water flow. This technique uses a time meter rather than a velocity or flow meter. Because of variability in system performance over time, additional information needed to verify this technique (e.g. operating pressures and number of hours run) and the agency's desire to discuss the specifics of this method prior to it being used; Ecology will include the use of this technique as one of the methods under section 170 "Alternative water measuring devices and methods". Ecology will issue a technical guidance document to assist its staff in addressing a number of specific issues that have come up during the rule writing. This specific indirect method (use of a time meter and system performance data) will be addressed in the guidance document rather than in the rule.

COMMENT

~~(16)~~**What alternative water measuring devices and methods can I use?** An owner or operator may use an alternative water measuring device or method that differs from those described in WAC 173-XXX, if:
~~(a)~~The method is approved in advance by the department; and
~~(b)~~The device is installed, ~~and installation are certified by a registered professional engineer to meet the general and installation requirements in the applicable sections above, and the device is~~ operated and maintained according to the applicable sections above.

RESPONSE

We have added language to this section to provide that a qualified person acceptable to the department may certify the adequacy of the method.

COMMENT

~~(18)**Will the department notify the Washington Department of Fish and Wildlife about the status of my fish screens?** Yes. The Department will notify the Department of Fish and Wildlife regarding the status of fish screens associated with diversions and withdrawal facilities subject to this rule.~~(Note: this activity is already conducted by WDFW.

RESPONSE
We are aware that that WDFW is actively engaged in fish screening efforts. The reason we included this language in the rule is because RCW 90.03.360 requires the department the notify WDFW of the status of fish screens associated with diversions. Essentially, the department will ask responsible parties whether a fish screen exists and share that information with WDFW.

PUBLIC HEARING SEPTEMBER 4, 2001 TACOMA, WASHINGTON

COMMENTER

Michael Rossoto, Washington Environmental Council

My name is Michael Rossotto. I'm the Legal Director for the Washington Environmental Council…. We support metering as a matter of good public policy and good law. It's essential to the effective management of the resource. It protects senior water users, and it protects in—stream flows and the values they support, including our state's precious endangered salmon and steelhead resources. We appreciate the stakeholder meetings that the Department did and feel that the published rule shows that the staff was listening and trying to be responsive and responded to several, though not all, of our concerns. Generally, we're supportive of the rule as written. It does correct provisions of the old rule which were inconsistent with the statute, and it appears to meet the minimum legal requirements of the statute and the order. But that is also the big problem with the rule, that it only meets the bare minimum requirements of the statute and the judge's order. The Department has important discretionary authorities which it is not exercising through this rule, and we see that as a big problem. Those authorities especially relate to the metering of ground water use. The Department has the authority to be much more aggressive on requiring ground water use, as your map shows. If you were just talking about the essential basins, you're missing huge parts of the state where ground water is even more important than surface water. And though the statute and the judge said do this where salmon are in trouble, it doesn't seem to us to make much sense to not do it where salmon are in good shape. Our fishermen, the state's Indian tribes, our recreationists, the fish depend on those healthy stocks staying healthy and not sliding further towards extinction. And so we think the Department needs to be out there moving very aggressively. And it's not just the fish, either. It's all sorts of competition for water for the residential development, for industry, and we need to be managing that water right regardless of whether or not salmon are in trouble. And in some ways, it's even more important where the fish aren't in trouble to be out there aggressively metering and making sure we're getting the job done. Also, in the reporting requirements, we think the rule should require reporting starting now. There are public interest groups and watershed planning groups that are ready to start using that information now, even though the Department doesn't have its database management systems in place yet. Also, the Department's own slides mentioned the metering program will be very important to establish trends in water use, and so having that record on file now will help us establish trends, help identify people who are chronically abusing their water rights and using water illegally. So we think that the rule should have that reporting requirement now. We will be submitting written comments that will address

some other problems we see with the rule. I think one is this accuracy measure. If there isn't any documented record of people not being able to meet the old plus or minus 2 percent, then we should stay with 2 percent. The judge's order already gives the Department extreme leeway with only requiring the Department to enforce the rule up to 80 percent. And if we lose another 10 percent per user, we could end up with not a whole lot of water actually being metered. And, finally, I think this continuity issue deserves some more attention. The statute does not say anything about the Department having to make some sort of affirmative finding that waters are in continuity – that ground water is in continuity with surface water or having an impact on the fish. The statute just says that ground water will be metered where that ground water and waters of the state, where fish are depressed and critical. And we don't think the burden should be put on the fish to have fisheries advocates go out and do the technical studies that establish continuity studies that establish continuity. It's pretty well established that most of the waters of this state -- most of the ground water of this state are in continuity with the surface water.

RESPONSE
Please see our response to your written comments on page 47

COMMENTER

Donald Williams

My name is Donald Williams. I'm a private citizen. I don't represent anybody at all. My only involvement here is I have a well on my property. It happens to be a Class B well, has two connections only, because they made me do it. It's a private residence. I happen to have a separate building. The property was sold, and the owner had to apply for a Class B water system. He didn't have that before. And although this rule, especially the section 040: To whom this rule applies -although you talk about exemptions, 5000-gallons—per-day exception, certain wells that are exempt, this doesn't say that at all. The rule leaves —— and you gentlemen here promoting it to be a statewide application for all draws of water, so I would think you need a section that says what this rule does not apply to. In other words, if it applies to this, but under what circumstances does this rule not apply to? And if there is a 5000-gallon-per-day exemption for Class A and Class B wells, it ought to say so in here. This rule does not apply for Class A and Class B wells drawing less than, 5000 gallons per day. Otherwise, I think you have a nightmare on your hands as this gentleman would like you to have to evaluate everything in the State of Washington. So I would encourage you to rewrite Section to include those parts of the rule that does not apply. And that's really my comment.

RESPONSE
Please refer to Mr. William's written comments on page 65 and also our discussion of the applicability of the rule to ground water use, including exempt withdrawals on page 21.

COMMENTER

Denise Smith, League of Women Voters

My name is Denise D. Smith…I am the water resource portfolio person for the League of Women Voters of Washington State, and I would like to submit brief comments from the League at this point to be followed up by more comments later. The League of Women Voters base their evaluations on issues of governance and legislation on position statements that they take as a group. We have long—standing position statements on water management that have been developing over the years, most recently amended in and‘. I will read those.

“The League of Women Voters of Washington support strict enforcement of laws affecting water quality and quantity management in Washington State. Enforcement requires emphasis upon cooperation and coordination among the many agencies as well as funding levels adequate to accomplish effective controls. Water claims under the jurisdiction of the State of Washington should be quantified. Water quality and quantity programs should be integrated. The League of Women Voters of Washington believe water use efficiency practices are essential to maintain state water resources. Differential rates, technical assistance and education are the most effective ways to achieve municipal and industrial water use efficiency. And regulation, technical assistance and education are the most effective ways to achieve agricultural water use efficiency.

In these positions, the League has not explicitly addressed metering. However, it is obvious that these positions are based on the assumption that an accurate amount of water use is known. We believe in openness in government. We believe in openness in use of resources. We strongly support a metering revision to the rules to take care of —— retroactively for water sources prior to the ‘93 change.

RESPONSE
Thank you for your comment.

PUBLIC HEARING, SEPTEMBER 5, 2001 BELLINGHAM, WASHINGTON

COMMENTER

Jeffrey Howlett

My name is Jeffrey Howlett. I’m a veterinarian with the Washington Department of Agriculture. I’ve been in Whatcom County for ten years and I would like to point out some flawed logic that I saw in the question—and—answer session, that we talked about the cost of doing business and that the farmer was expected to pass on these costs. I think we need to understand that agriculture is one of the only industries that does not dictate what the cost of their product is. They are given a price for their product and they have nothing to do with determining that cost of production. There are half the number of dairy farms that there were when I came ten years ago and I expect that when I retire, which will be in about 14 years, there will be no dairy farms in Whatcom County. When we talk about protecting agriculture or we talk about protecting the dairy farm, and yet we have failed to realize that they do not determine the price of their product; and, without help, they cannot survive. And what they need more than anything else in agriculture is a crop that makes a profit. And the cost of metering wells and reportin and this type of thing has not been addressed with the fact that farmers do not set their costs of production. And that’s basically all I have to say, so thank you.

RESPONSE
Please our discussion of the costs of measurement compliance on page 23.

COMMENTER

Gary Sorensen, Skagit County Public Works

COMMENT
My name's Gary Sorensen and I represent Skagit County Public Works and I have three comments that I'd like to read into the record and just note Skagit County will be following up with additional written comments to meet your September the 24th date. So I'll go ahead. Comment one: Ecology has indicated in News Release 01-147 that they, and I quote, "have no intention of requiring people with small individual water wells to measure their use, and measuring water use from individual exempt withdrawals is not part of the plan."

However, the proposed rule text does not include any provisions for this exemption and our reading suggests that strict application of the rule could require exempt users to install measuring devices and report measurements under the conditions articulated in the rule. Therefore, can Ecology articulate their expectations or approaches to exempt wells within the rule text itself?

Comment number two: Ecology indicates in the notice of proposed rule-making that, and I quote, "data will improve the Department's ability to make informed water management decisions, including determining whether water is available for appropriation and whether water users are in compliance with their water rights," unquote. Current state law and case law reflect a use—it—or—lose—it approach. If water is not put to beneficial use, the right to that water may be forfeited. However, there are proposed changes to state law and Ecology's administrative approach to water rights. Therefore, will Ecology use measurement data reported under the proposed rule to make changes to water rights immediately or would such actions be suspended pending proposed legislative changes in rule-making?

And the final comment: The proposed rule requires measurement and reporting of water use under existing and new water rights in waters, and I quote, "in which the salmonid stock status is depressed or critical as determined by the Washington Department of Fish & Wildlife."

Can Ecology clarify or provide reference to the criteria by which depressed or critical status is and will be determined? Is that status based on 1992 SASSI results or on sporadic site specific evaluations by Fish & Wildlife?

RESPONSE
Please see our response to your written comments on page 83.

RCW 90.03.360 provides that Ecology consider whether salmonid stocks are critical or depressed "as determined by the Department of Fish and Wildlife." The Department identifies stocks which are critical or depressed in a Salmonid

Stock Inventory (SaSI). Critical stocks are those that have declined to the point that the stocks are in danger of significant loss of genetic diversity, or are at risk of extinction. A depressed stock is one whose production is below expected levels, based on available habitat and natural variation in survival rates, but above where permanent damage is likely. For further information, please see: http://www.wa.gov/wdfw/fish/sassi/intro.htm.

COMMENTER

Richard Dahlgren

I'm Richard Dahlgren. You know, if you're going to find something as important as water and so on, you need to do something. Either you're hiding and you don't want an audience here, or what's going on? I -- I don't know. That don't look too good. You couldn't —— you couldn't have it on the radio and where people are? Everybody uses water and it's quite serious, you know, the use of water. And so okay. That's all.

RESPONSE
Thank you for your comment. Please see the appendix for a copy of the public notices that appeared for this hearing in the Bellingham Newspaper.

COMMENTER

Robert Wiesen

My name is Bob -- Robert Wiesen, W-I-E-S-E-N…I happen to be a small business owner and I don't —— I don't see anything about the assessment of the impacts on small businesses. I think almost all new regulations that are passed or are in the process, they're supposed to have an assessment on the impact of small businesses and I think most farmers are small businesses.

RESPONSE
A Small Business Economic Impact Statement was prepared in conjunction with this rule proposal and published in the state register simultaneously with the rule proposal.

PUBLIC HEARING SEPTEMBER 11, 2001 WALLA WALLA, WASHINGTON

COMMENTER

Jean Dolling

I'm Jean Dolling. Now, I think I can speak for myself here and a lot of other farmers here tonight. We're farmers, we live out in the country, we're independent free spirits, and we grow

food because there's demand for food in the world. And all of a sudden here we're told that fish are more important than we are. It seems like that's -- you know, I don't care about all the commentary in between, the bottom line is we're supposed to give up water so the fish can have water in the streams. How are we supposed to grow food without our water for the crops?

You know, there's a real good question here. Have we ever looked at why there are so many of us that we can't feed the world, and we need more water for fish, but yet how are we supposed to feed the people that demand, you know, that we feed them? It's a good question. I don't like surveillance. I don't think anybody, much, that's a farmer, likes surveillance. And this is what we're getting. It's getting down to it. I understand that we need to know where the water is and if we've got enough supply, but I think we need to look at the overall picture, that there's more demands put on the farmer to feed the people of the country and of the world than we maybe have water for. And I think we need to look at, probably, population control, which may be a dirty word to a lot of people, especially the right-to-lifer people. But reality is reality, and who's going to be the first person to give up their supper? The environmentalists? I don't know, it's a good question, because we wouldn't be growing food if people weren't standing in line, waiting to be fed.

And this is getting to be damned expensive water, I know that. Millions of dollars have been spent studying the fish, and the streams, and what's going on, and why don't we seem to have fish in the streams anymore. And I still have one good question that's never been answered. In 1870 they figured out that they had such a terrific problem with not having enough fish in the waters that they started the fish hatcheries, and we didn't have a damn dam at the time. So, what is the real cause of the problem? I don't think we even know what the problem is, and here we are, you know, we're just bumbling around in the dark, trying to find solutions, and we haven't even figured out what the problem actually is. So, I think we'd better go back and make a lot of re-assessments before we start demanding that farmers have to start metering their water and accounting for every drop of it.

You know, we don't have time for this. It's expensive for equipment. We spend a lot of time -- our summers are, you know, almost twenty-four hours a day out in the field some days. And I don't think that you ought to be picking on farmers.

RESPONSE
Thank you for your comment.

COMMENTER

Joel Huesby

COMMENT
My name is Joel Huesby. I've been attending a lot of water meetings over the last few years. I'm a farmer, I farm 225 acres. I'm a member of two irrigation districts, and have three shallow gravel aquifer wells.

My whole thing about this is one of seeking balance. mean, there's a finite amount of fresh water to go around. There's an increasing demand for that water for irrigation, municipal uses, fish uses, and we're all going to have to learn how to get along and live together. If that means I've got to do my share, I'm willing to step up and do what I have to do as an irrigator, both in terms of allowing metering devices, or whatever, on my property, and also in my conservation measures -- what I do with my farm, how I treat my soil, and how I can do a better job with less water, if I need to. I believe that people are created higher than fish, yet that doesn't free us from the responsibility to take care of them if we can. So, again, I look for balance in this thing.

I don't see this necessarily as a big infringement on personal property rights, at least yet. I mean, if the measuring is used for better allocation of our short natural resources,1 fine, let's measure it. But I just keep seeking balance, so I think this is a good thing.

RESPONSE
Thank you for your comment.

PUBLIC HEARING SEPTEMBER 12, 2001 YAKIMA, WASHINGTON

COMMENTER

Daniel Martinez

COMMENT
Yes, I'm Daniel Martinez. I would like to reiterate my earlier comments that we don't need any more rules, we need more action on what we're doing, and we need more water storage.

RESPONSE
The department is under court order to promulgate a revised rule by December 31, 2001. The department is repealing existing rule Chapter 508-64 WAC and replacing is with Chapter 173-173 WAC.

COMMENTER

Gene Jenkins

COMMENT
My name is Gene Jenkins. I live in Selah. My comments are specific, to specific areas, so I'm going to go down that one. At Chapter 173-040, I think that you need to put in this thing that anybody that lives within an irrigation district, water service district, you need to specifically state that they're exempt from complying with the reporting part of it.

Your rule says that they have to report, there's no exception, and you need to put an exception in.

RESPONSE
It is the intent of the regulation to only apply to primary diversions (e.g., source meters, headgates, etc). We have added language to the applicability section of the rule (WAC 173-173-040) to make this clear

COMMENT
On 173-050, for those people that live on a tributary that have a stream patrolman who's under the control of the Department, we should not have to report. That is what this person is hired to do. I know of only one sub basin in the state that has one, and that's Wenas. But we pay him to regulate the water at a natural flow, and that is his job, to report to you how much we draw. So, any sub basin that has a stream patrolman he's working directly under the auspices of the Department, and you shouldn't have to report.

RESPONSE
We have added language that would clarify that Ecology would accept data submitted by a Stream Patrolman on behalf of individual diverters.

COMMENT
On 173-100, your plus or minus ten percent on flow meters, we had a long discussion at the technical advisory committee. I still reiterate that on dirty water systems, which are irrigation water systems, trying to comply with a plus or minus ten percent is pushing it real tight. I don't think you're going to get the compliance. Under clean water systems, yes; under domestic water systems, yes; but under dirty water systems, I don't think you're going to reach the compliance level. I think you need to take a real serious look at -- I think it's the state of Kansas that's plus or minus 30 percent. I mean, you need to take -- and I can't remember what Arizona's is. But you need to take a look at some of the other states, and we made that recommendation.

RESPONSE
As part of the development of this rule, the department reviewed the measurement accuracy requirements of other states. We could find no state where a measuring device accuracy of plus or minus 30 percent was acceptable in regulations. You may review Kansas's flowmeter requrirements at this website: http://www.ink.org/public/kda/dwr/Laws-Rules/KWAA-2000Regs-Art5-1.htm Arizona's water measurement regulations can be reviewed at http://www.sosaz.com/public_services/Title_12/12-15.htm#ARTICLE%209.%20%20WATER%20MEASUREMENT.

COMMENT
Under 173-210, the requirement that the individual landowners notify the Department of any changes in the water right or changes in the ownership of the property, I think that's the Department's responsibility. You guys can work out a deal with the county. But requiring individual landowners to notify the Department every time a piece of property is sold is ridiculous. And that's basically all my comments.

RESPONSE
This provision has been deleted.

COMMENTER

Sharon Churchill, Bureau of Reclamation

COMMENT
I'm going to start out broad and narrow down, and what I want to underline is the importance of metering and why we'll need it in the future. So, here we go.

In the 1950's, the science, the technology and the economics of measuring water demand in the United States came into its own under the Eisenhower administration through federal funding.

So, if we look at demand figures, average demand figures throughout the United States from 1950 to 1975 water demand increased at a fairly rapid rate, and then it high 1975 and it went down. And it started to go down for two reasons.

The first reason it started to go down was increased efficiency in agricultural use of water. This is very important,because it was attenuating another sector's water use, that's urban water use, that had been growing since 1950 and never quit, never quit through 2000. Okay?

The other sector that helped attenuate urban water demand was industry, and industry did it for an entirely different reason. It was economically driven, but it was also regulatory -- that is, under the Clean Water Act. Okay, so we know that water demand after 2000 has increased; about 1995, 1996, it started to increase precipitously. That's because the rate of increase in urban demand overcame the attenuating factors from agriculture and industry. So now if we forecast into the future, 2020, 2030, we have deficits facing us. So, we have demand and we have supply. Okay? Supply has to be augmented to meet demand, and demand has to be decreased. And most of the decrease in demand has to come from the fastest rate of growth that's still coming from the urban sector. Okay?

So, if you want to meter, think about the metering requirements in cities where there's still incredibly inefficient metering of urban water users. And then also think about the small quantity users throughout the state who may have a significant effect, cumulative effect, on ground water withdrawals in particular. Okay, so now let's talk about some of the bright parts of the future. We know that Texas, Kansas, Arizona, Nevada, California have all stepped up to the front and they have said how are we going to meet demand in the future. They did that by developing something called a water budget, a state water budget. And a state water budget requires numbers on consumption and numbers on available supply. Part of the science of available supply centers on how do we get supplemental water. In the west, the majority of water coming into watersheds occurs during a very narrow time period that's during the spring melt. So if we have an improved capture of water during the spring melt, and storage of that water either at the surface in reservoirs or in the subsurface in shallow aquifers, then we have a potential in the future to offset a number of pressing problems that we face. One is fluctuating supply based on climate change. A second is how do we cool streams and how do we meet instream flow

requirements for fish and still supply water for agriculture. And a way to do that is the storage of water in very surfical, in shallow aquifers by improved capture, and injection in some cases later on in the year; and then withdrawing that water at the end of the summer or early fall, when it's necessary for other purposes. Okay, so there is a need to accurately monitor what is required for consumptive use and then what is required to meet demands in the future. And when we're talking about meeting demands in the future, you have to develop something called a state water budget.

A state water budget is not an easy thing to calculate. The state Department of Ecology has started in the right direction with mandates to pull numbers together from the various WRIA's for water demand forecasting for the future. But that has to be refined, and one of the ways it has to be refined is you need better numbers. So some of the metering that Ecology is talking about now is important.

I'm actually advocating additional types of metering, and I'm also advocating a very different change in the mentality of how the state looks at water quality as well. That is, if you're going to create ground water aquifers, say, for storage of water in the future to meet demands and other third-party needs, for instance insuring adequate water for all water rights users, then it requires a change in water quality requirements for the injection of water into the subsurface, into shallow aquifers. You may need some kind of a two-tiered system for water quality in the subsurface. That's something that other states have had to look at as well. So, I am advocate of metering, but I'm an advocate of a much broader brush for metering to cover all of the different water use sectors in the state. You also will have to recognize the fact, and it's a basic fact, the majority of water that has to be moved to meet demand in the future has to come from agriculture. And there are some what the economists call third party externalities. Those are negative impacts to agriculture by the transfer of this water. So, water that's stored in the subsurface could be allocated through, say, water markets. And these water markets have to be monitored, and the water markets have to have permits associated with the movement of water in the subsurface. And then you have the question of asking what are the impacts of this water transfer from agriculture to urban centers. It's especially unfair if you're talking about metering the agricultural sector and not metering the primary growth sector, the urban growth sector. Those are my comments.

RESPONSE
Thank you for your comments.

COMMENTER

Don Jacobs, Farm Bureau

COMMENT:
Good evening. My name is Don Jacobs. I'm going to be commenting on behalf of the Washington Farm Bureau, and I've just got a couple of comments to make. One of them is we understand that the court has ordered that the meters be installed. What we're concerned about is the cost to the individual landowners of the meters. There was a comment in the question-and-answer period that it's a cost of doing business. While I agree with that to a point, I can point out

several family farmers that have more than one diversion, and the cost to those family farmers is going to be in the twenty to forty thousand dollar range just to comply with this. And that's not a cost of doing business, that's a burden. I think that's something we need to be cognizant of, and we have to try to work our way through that to help these people out. The second is it's becoming apparent that there's going to be this ratcheting down effect by Ecology, and other agencies for that matter, that we want to try to limit the use, obviously, of the agricultural community. I think one of the things we need to be cognizant of and aware of is that there are a lot of streams in this state where you have a series of diverters, family farms diverting water, and when you go to the end of the creek or the stream that they're diverting water out of, there's actually more water in the stream than is being diverted out of it. I mean, the diversions are actually increasing the flow of water in the stream through -- the term just escaped my mind-- aquifer re-charge, ground water re-charge, and things like that.

So we can't just totally look at a system and say, well, four or five farmers are using too much water, there's not enough water for salmon. I can point out where there's case that, as you restrict the flow on the diversion, the stream flows go down as well. It drops with it. And our concern is that as you begin to restrict some of these people, that there's going to be a call that there's not enough water for salmon because the ground water re-charge declines with it. And I think we have to be able to look at this from a holistic type sense as well to make sure that we're not impacting both. Thank you.

RESPONSE: Please see the discussion about metering costs on page 23.

COMMENTER

Ron Anderson

COMMENT
I'm Ron Anderson, speaking on behalf of myself. I live here in Yakima. I'm concerned mostly, as I stated earlier, about the process. After all this information is gathered, after the system is put into place, what eventually down the road is going to happen with this and how it's going to be used.
Who's going to be in charge of all of this? Obviously, it's my view point that the state is going to use this as a tool to not only allocate water, understanding that there is a finite amount, and it needs to be monitored and allocated in a proper fashion. But I go back to the point I made earlier, that I feel this is a mechanism, long-term, by the state not only as a revenue source, but as a way of controlling water. And when you control the water, you control the land -- as we've already seen in this state and in other parts of the country, Klamath Falls, for example. So I will make more of my comments in detail via the internet. Thank you.

RESPONSE
The department lacks statutory authority to assess general water use fees. Please see the discussion on page 23 regarding the relationship of this rule to water use fees.

COMMENTER

Onni Perela, Roza Irrigation District

COMMENT
MR. PERALA: My name is Onni Perala. I've been asked to reiterate my comment that water measurement has been going on in this basin for a lot of years, by many people. Water measurement is a matter of everyday work on the Yakima-Tieton Irrigation District, Kittitas Reclamation, Rosa, Sunnyside, Kennewick, and a number of those districts that pre-date the Bureau-constructed irrigation districts. There were a lot of people who didn't even pay attention to those numbers, even back into the early years, up until the time the Aquavella case came along. That's the adjudication. At the time of the adjudication, there was a lot of people that came in to the Bureau of Reclamation to look up the numbers and prove what they have been diverting, and the fact that they had been diverting for a long time. And it was shown in Aquavella that a permanent record was a lot stronger in court than an allegation that the water had been being used. So, rather than resisting measurement, remember, once you measure water, you are the first beneficiary of that number. Use for that for your operation. And it is also for your defense when it comes up to proving it against other demands. And, yes, there are going to be competing demands, more and more of them in the future. So, the idea is figure out how to do it. We argued long and hard on the committee, when we were developing this thing, on accuracy. I was a staunch proponent of saying let's not argue over accuracy right now, let's just get the measuring done in whatever way, and the most economical way feasible. Let's get it going. Do not argue the fact of measuring and don't get hung up on accuracy. But, measurement is your best proof that you are managing your resource.

RESPONSE
Thank you for your comment. In determining an appropriate accuracy level to be required in the rule, the department considered the recommendations of the technical advisory group and also had discussions with representatives of vendors and who work in the metering industry. The accuracy requirements we ultimately selected are within the range of accuracy requirements required by other states. We do recognize that compliance with the accuracy levels may be difficult to achieve for some users and have incorporated provisions for flexibility in the rule to accept other accuracy levels.

COMMENTER

Tim Dennis

My name is Tim Dennis. I'm here to testify against the proposed rule in that it's unduly burdensome for reporting frequency. Daily recording is going to be almost impossible to do

RESPONSE
We have revised the reporting frequency to eliminate the requirement for daily recording for those who use more than 200 gallons per minute. The requirement for those users is now weekly recording.

COMMENT
If the state wants to collect the data, there should be tax exemptions for all the devices and costs in maintaining and measuring and record-keeping for that.

RESPONSE
Thank you for your comment.

PUBLIC HEARING SEPTEMBER 13, 2001 WENATCHEE, WASHINGTON

COMMENTER

Daniel Booker, RH2 Engineering

COMMENT
I'm Dan Booker. I'm representing RH2 Engineering. I guess I would just reiterate my request that the Department of Ecology address a little more specifically the question of calibrated surface water diversions. Thanks.

RESPONSE
Mr. Booker's comments relate to comments he made earlier during the question and answer session at the public hearing in Wenatchee on September 13. He had questioned the department how a person would calibrate a diversion for a full range of flows without exceeding the maximum quantity authorized on the water right pertaining to that diversion. Mr. Booker stated that, to calibrate a diversion, it is necessary to temporarily divert more water than will be diverted under normal operating conditions. The department believes that it would be permissible for a diverter to do so, provided he is granted a permit for short-term water use. These permits often are issued for activities of a non-recurring nature: hydrostatic testing of pipelines, water use associated with construction activities, and dust control. The department believes that a short term diversion to calibrate measurement at a diversion qualifies as a similar kind of activity.

COMMENTER

Jerry Jones

COMMENT
Yes, my name is Jerry Jones. My statement essentially is to declare that I have an understanding of what the Department of Ecology is trying to do here, and I think it's critically important for all the citizens involved, whether they're ecologists, ranchers, dairymen, whomever uses the water. The Department of Ecology is charged with undertaking an historical undertaking of making a benchmark of what the water use is versus what we have. As conscientious citizens, I think this is not only a laudable endeavor, but should be supported by all the citizens of the state, however they use the water.

Unless we know what is being used, we cannot ever decide how best to use it. We won't know what we have unless we start metering, measuring, finding out exactly what we have in the way of this resource which belongs to all of us. I would hope that all water users, whether they have water rights or not, can appreciate that this is a public resource. And unless we all work together to figure out how best to use it, we'll be locked into the age-old battle of who's got it/who's going to use it. It's been a problem since time immortal. So, I think that we all should cooperate as best we can. I know there's practical concerns. We all can appreciate those. But the bottom line is we need to establish a benchmark with which we can work and decide how best to use this resource.

This year isn't unique. We will see them again. And unless we work together to make this an equitable use of this resource, not just for us but for the creatures with which we share this planet, we'll be locked into this cycle forever.

I feel for all parties concerned. We're all in an extremely emotional but very serious endeavor. I think good faith, trust, and a lot of hard work is ahead of us. The Department of Ecology is doing the best they can, folks, and we need to do the same. Let us help each other. Thank you.

RESPONSE
Thank you for your comment.

PUBLIC HEARING SEPTEMBER 17, 2001 SEQUIM, WASHINGTON

COMMENTER

Pat Allen

COMMENT
The comment I would like to make is this is we were all told as private water well owners that our wells were not going to be metered, but I'm also looking at the sign-in sheet and I don't think people who signed in realized this is a legal document that can be used in court to show that these people were notified and then all of a sudden to have it said we notified them, their wells can be metered according to the Rule 053, and I think something should be put on the top of this sign in sheet stating that the people were told as private water well owners that they will be notified prior to having their wells metered. Thank you.

RESPONSE
The requirement to measure water use is set in statute. (RCW 90.03.360). It exists regardless of whether a person is formally notified by the Department of Ecology to come into compliance. Should the department seek to bring a person into compliance, then additional notification would be performed. Please also see the discussion on the applicability of the rule to exempt withdrawals on page 21.

COMMENTER

Ted Cordua

COMMENT
My name is Ted Cordua and I am a War Veteran and a tax-paying property owner, I would like to make a brief statement. This water metering program was suggested a few years ago. I believe that State of Washington, Department of Ecology is trying to wear us out by bringing this matter up again.

Nowhere have I seen any solid scientific evidence that there is a ground water shortage in this area or that the use of this aquifer waters is depleting the Dungeness River or any other river of its water. I charge the State Department of Ecology to prove it scientifically! I deeply resent any unauthorized government person coming on to my private property without my permission or warrant to install a water meter. Implementation of this regulation strikes at the very heart of the Constitution.

RESPONSE
The requirement for all diverters to measure their water use is a function of statute. Please see the discussion on the applicability of the rule to exempt withdrawals on page 21. Please also see the discussion on page 22.

COMMENTER

Eloise Kailin, Protect Peninsula's Future

COMMENT
Eloise Kailin, I'm president of the Protect Peninsula's Future. I signed up later, I expected the I would get called up at a later time. First I want to thank you for coming to Sequim. I realize there's a limited number of places in this is State that you have time to visit and welcome to Sequim. Although you have heard some harsh comments from my neighbors, not everybody in Sequim feels this way. My organization, my environmentalists are all in favor of what you are doing. We are well aware there's a limited amount of creeks. We are aware that the amount of water in the Dungeness and Elwha rivers falls below the levels that are sufficient to carry the fish that it should be carrying. They are water-quality limited bodies. We are very aware of this and we applaud your [comity] in handling some of the harsh comments you have met.

RESPONSE
Thank you for your comment.

COMMENTER

Kip McKeever

COMMENT
I'm speaking as a rural resident that has a well and relies on that well for domestic water source for my family, and I think you're all aware that it costs a lot of money to put a well in. Depending on how deep it is it can run from $1000 to – my particular well runs about $8000 to put it in, and I really have a problem with somebody putting a meter on it. And I realize you have said you are not going to do this is at that time, but I think we can read between the lines eventually down the road you will next start focusing on that other 20% and start knocking on our doors to put meters in our wells. We probably don't use that much water compared to what you are focusing on right now, and although you have said this is —— was a Legislative problem, you do write the rules. You work closely with the Legislature and my comment to you is employees try to find some way to come up with some language to include in your codes and regulations that exempts domestic users from being metered or having their water cut off. Our families and way of life depends on it. Thank you.

RESPONSE
Please see our discussion on the application of the rule to exempt withdrawals on page 21.

COMMENTER

David Lotzgesell

COMMENT
As a property owner, I'm concerned too, about our property rights, our rights as citizens. But, I think I come today with a more unique viewpoint. I'm thankful that I'm a 5th generation to live on our family farmlands. One of the key reasons my wife and I moved back to our family farm two and a half years ago was to keep the farmlands. Everywhere we turn in the last two and a half years people say save the farmlands, save the farmlands. I don't know of a farmer alive that wants to sell his farmland, but everywhere we turn there's restrictions. Everywhere we turn someone wants to come on our property. Everywhere we turn you can't take a few logs to take pay for the taxes because there's an owl nearby. It's choking us. So you know what my brother and I are the only siblings that live in the Sequim area, we have three others outside of the area. When my parents give that farmland to us, what do you think is going to happen? Tell you what; these kinds of restrictions will be the incentive that those other kids will use to sell that property. So Eloise, I don't want to develop farmland and I call on any friend of farmland, any friend of this beautiful land that most of you retired to because of this land - to fight this. Because, I'm telling you, we are land rich and money poor. Now, you eluded to Federal funds available and et cetera. Well, you know what, I heard that about restoring farm barns. Our barn was built in 1917 and needs foundations. There's no money is available. I have not got $500 to re-roof it, it's

falling apart. They talk about monies for restoration for duck habitat — no money is available, folks, so don't throw out that carrot because it's not going to be there. If you want to save farmlands, you want to save the beautiful green space we got, stop choking us with these regulations.

RESPONSE
Please see the response to concerns about paying for measuring devices on page 23.

COMMENTER

John Bennett

COMMENT
My name is John Bennett. I'm a physician. I'm the president of the Libertarian Party of Clallam County. You know, you take our liberties one at a time and you attack us one person at a time and you take us one little group at a time, and we as individuals can't protect ourselves from our own government, and because you tell us well, it's not going to affect our own personal wells, how many people left when you said that? That terrible lie? You're just now you're going to take the large users, but it's going to be everybody pretty soon. The idea that my own government will come in —— my government is supposed to be designed to protect my personal rights; my right to property. The right to property is inherent in our system and what good is property if it doesn't have water - and if we don't own the water, the value of the property is nothing. You tell us the water under the ground is public. True, it's public. But when I we put work and money and put a well in the ground and bring it up to the surface, that's no longer public. Then it's ours, and that's what our property right is about, our rights to wells. It strikes terror into my heart to think my own government is going to take away my right to my water. We have a war now against terrorists and all who would harbor them and the Department of Ecology could be classified as a terrorist organization by some people. I just ask you to use your position as important people in our government to lobby the Legislature and ask them to guarantee in writing our right our right to property. They can do that and they depend on you for an opinion. You go home and you tell those people in Olympia that we want to keep our water.

RESPONSE
Please see the discussion about the applicability to exempt withdrawals on page 21. The point you raise about the importance of water to the value of private property is an important one, and Ecology believes that it highlights why it is important to effectively manage the public water, to accurately account for its use and to ensure compliance to protect existing rights.

COMMENTER

Steve Marble

My name is Steve Marble. The greatest accomplishment of Western civilization is the achievement of individual liberty through limits on the power of the state. That liberty is now under assault, not only by terrorists but also by the step by step usurpation of authority by agencies of our own government. Under the guise of environmental crisis, use of private property is continually ratcheted down. Planners know better than us how best to use our land, that is to say non—use. Zoning, growth management, comprehensive plans, critical area ordinances, clean water districts, it's been quite a downhill slide for property rights over the past 10 years. The underlying assumption is that property owners are too dumb and environmentally insensitive to manage their own affairs. They need guidance.

We see the endangered species act tortured into a tool never envisioned at its inception. We see hand picked, agency dominated, consensus committees referred to as "citizens group" guiding public policy. We see rural cleansing through shutting off water in the Methow Valley and the Klamath Basin. We see a concerted effort to destroy rural America by use of expanded or concocted environmental crisis to remove people from the land. The Department of Ecology commits its energy, year in and year, out to ever expanding control over our property, our water, our lives. Now we are here to discuss water metering rules. The measuring and reporting rules created the framework to implement meters on our wells. Given the tenacity with which DOE has endeavored to expand its authority - which its done every Legislative session as far back as I can remember — through the elimination of exempt wells and excessive shoreline rules, given DOE's record for disingenuous behavior, can any credible argument be made that, just because DOE lacks manpower to exercise their authority they have the authority, the lack the manpower – to meter wells, we shouldn't be concerned?

That's an illogical conclusion. You people, if you have the authority, will be going after the exempt wells. Rural domestic water consumption accounts for less than 1% of water use. 70% of this water returns to the aquifer. Therefore, any conservation brought about by the imposition on individual freedom by metering these wells would come from about 3/10's of a percent of the total water use, which is hardly a drop in the bucket. In other words, any argument about saving fish by meeting individual wells is specious. You don't reduce the office budget by limiting paper clip expenditures, and don't increase 'instream flow" by counting the gallons used by each individual domestic well. It's not about saving fish. It's not about the environment. It's about control of the people. It's about an agency's efforts to repudiate limited government and assault individual liberty. No water meters.

RESPONSE
Please see our discussion on the applicability of the rule to exempt withdrawals on page 21.

COMMENTER

Larry Campbell

Howdy, I'd like to address the board and citizens who are here. I work on a 334 foot troller in the Bering Sea. Anyway, in my readings in law and readings on —— I should say different things that have happened in the past with law, I've come to learn the Road Act, which says Congress shall —— Congress and law enforcement agencies shall never have the power to give tickets, give -- it says never have the power to give tickets, should never be able to give fines or anything as far as your drivers license. Let me start over, sorry —— Congress shall never have the power to inflict fines or give tickets or anything because of our drivers licenses. What happens is we sign a contract with the State of Washington to obey those rules.

Here we have also ordinances and we have statutes. What I just found out - and I just asked this man over here in the corner -- wherever he was -- anyway, the gray haired man -- he told me that part of the studies and part of these things that you are doing as far as to find out how much water we use and everything is to enforce these laws. Ordinances and statutes and stuff like that are enforced by studies, are enforced by you guys pleading guilty, you guys saying that basically, yes, sir you'll pay the fine. That's what I'm trying to say here. Also James Monroe (sic) wrote the Road Act and when he did, that was his intention is when you pay -- you drive down the road, you are not suppose to have to pay for any license tabs. You are not suppose to have pay for any fines, or anything for speeding or anything. Yes, we do want to be comply. But our Washington State drivers license -- we sign a contract to the State of Washington saying we have to the same way when we have an ordinance or anything else because the ancient laws of this country were written out as laws, can not be ordinances -- laws can only be laws and ordinances have to be approved. One other thing -- can I have a little more time employees? Also, I'd like to ask these people where they're getting their money? Is this is coming from grants? A lot of money for your studies? I don't know. But I know there's 30% of any grant that goes towards studies, anyway, goes to a certain person or group -- I'm sorry I'm being cutoff earlier or I probably could finish what I really had to say. My last is if you want to come on my property, you better bring a Sheriff and a warrant. Thank you.

RESPONSE
Thank you for your comment. Please see our general comments regarding private property access on page 22.

COMMENTER

Greg Fleming

COMMENTS
How do you do? I do need that card back I have some notes on it please. Thank you. Along with being a private citizen, I'm also a US Vet and I also have a background in criminology and a degree in environmental science. That was number one on my list. Number two is I have a statement for the people; they say the Legislature can make laws on water rights which are taxes and you say you have different pots of money to fund the Department of Ecology. The statement I have to make and the question is, how much more does the DOE have in this pot to give to the Legislature on their own causes?

RESPONSE
The Legislature allocates money to the Department of Ecology for specific purposes. Ecology does not appropriate money to the Legislature. For more information regarding Ecology's budget, please see the following Internet site: http://www.ecy.wa.gov/news/99701/99701.html

COMMENT
And then on the WACs here, I have noticed that on several different paragraphs, it says; "In the case where wells are authorized for purpose of metering and supplementing surface waters from combined wells, both sources shall be metered." Meaning open flow and wells.

RESPONSE
The purpose of this language is to measure all water that is diverted and withdrawn.

COMMENT
It says also - and I interpret this to say; "Authorized employees of the Department shall have access to the measuring devices and facilities if the Department has given reasonable notice to the property owner." And I assume that this meeting is that notice and future notice for future plans.

RESPONSE
The requirement to measure water use has been established by statute (RCW 90.03.360). It exists regardless if Ecology enforces it or not. Please see the discussion on private property access on page 22.

COMMENT
I also see, "That the Department may modify the required degree of measurement precision when it determines that a different degree of measurement precision is appropriate for the purpose for which the specific the data is being collected." That's an open book

RESPONSE
This language has been stricken. Language consolidating various variance provisions in the proposed rule appears new section WAC 173-173-174

COMMENT
And lastly to close is, this says, I fought for the freedom and to keep our honor and freedom in this country, not to let tyranny reign again. Thank you.

RESPONSE
Thank you for your comment.

COMMENTER

William Kuss

COMMENT
You folks could not have picked a worse time to have -- You couldn't have picked a worse time to pick a meeting like this, and that was not anybody's fault. Also, I would say the information we received in the newspaper came from a former county commissioner who actually had an article that she wrote about this particular meeting and led people to believe their private wells were going to be beneath that, which was too bad. Possibly they may. You can not blame the public too much for not believing some of the things you say simply because we see in the paper that we have 440,000 Chinook salmon that came through the Columbia River, more than in 20 years. Right now we have more silver salmon out here than we know what to do with. In Quilcene River, you can walk on the fish. This isn't due to a shortage of water, this is due to the fact we had El Nino from the north and it moved to the south - I'm a professional boat builder by trade, and I know people who have charter boats in the area and they're doing fine, catching lots of fish. Salmon don't like warm water. They came back here in droves because of it and Department of Fisheries never said one thing about that thing. And I also would chastise the public for not paying attention to their politicians because this has been going on since 1993. Weare members of the Highland Irrigation System and Highland irrigation ditch we've lived here for 40 years and taken water of f it for that amount of time. When this came up to the Highland Irrigation System, a grant was given to them for a water meter system and they put it in. But most of the people on the ditch didn't even know that. The cost was apparently spread out to the people that paid for the ditch. Now all of this stuff is part of knowing what your politicians are doing and paying attention to your politics. You have the right to talk to your Legislature, and you can do it but we are to damn lazy to do it, that's the problem and I think that's a shame real. Our family has spent a lot of time in politics in this part of the country. We have raised 4 kids here, but still in all, people are afraid that the camel is going to get its nose under tent and that's what you are up against. So you better present this stuff to the different communities a little better before you bring it in to these meetings. That's what's happened here, a lot of people walked out simply because they realized it was not going to effect them. Do a little better job on advertising and you won't have so many problems. Thank you.

RESPONSE
Thank you for your comment. You may find information about the actions Ecology took to publicize this hearing in the appendix of this document and also on page 20.

COMMENTER

Roger Short

COMMENT

My name is Roger Short, I am a dairy farmer in Chimacum. I have dairy cows and I'm kind of involved in the Preliminary process of setting up for the crop program, which is a conservation reserve enhancement program and that is what is going on. I was also involved with the Dungeness—Quilcene watershed planning unit and the first meeting I went to I introduced myself as Roger Short and I'm here to protect my butt, and I guess I kind of got a reputation that way. But, really, my real thoughts were to try to make things work out, but I have lost so much confidence in the Department of Ecology and the way politics rule all the environmental things that go on.

The water measuring was authorized in, what, 1963 - in the 60's there some time -but it's taken 35 years before Ecology thought it was necessary to do something. But as soon as the environmental groups sue them, then it all of a sudden it becomes a political thing for them to measure water. I hear about measuring exempt wells in the early 90's, and the environmental groups at the time said they are going to sue if they don't get it.

I am a dairy farmer and I know what levels are there. I know some dairy men who have spent over a half million dollars in third-party lawsuits. Someone else gets something up their hind-end that they want something done and it just -— it's politics what's ruling everything we are doing.

Someone mentioned salmon. When you have a school of salmon 37 miles long and 5 miles wide down the coast of Washington about a month ago that is now going up the Skagit River and many other rivers at Quilcene. It's right there. There are four or five people down there getting their four salmon, they get their limit, to get to the truck and put it in the freezer in the back and get another four. They do this is all day.

There's so darn many salmon around and not because of the additional water.

And I find it very difficult to understand some of the comments that was made earlier during the presentation, because I'd like to sit down and kind of pick them apart one by one because there's a lot of things that I feel like I have a better insight of what is happening than we are being told. I have —— I guess I'm paranoid about things that I hear, because, um, Ecology goes beyond what law says. I kind of think the Legislature and I have a pretty good rapport with the Legislatures around the State, some of them at the meetings with the Ecology people and Ecology people don't listen. They go beyond -- and I know darn well that this water measuring is

going to go beyond what you are telling us today. I mean, if it doesn't, it will be a totally different trend and I just can't see it being a different trend. Thank you.

RESPONSE
Thank you for you comment.

COMMENTER

"Jane Doe" (no name stated)

COMMENT
My name is Jane Doe.
I live on 1 Freedom Lane in Hallelujah Valley. And, you have all this money that you are talking about. What you really need to do with that money instead of trying to tax us for more, why don't you try and educate us, you say that you have all this water problem going on. You have problems saving the salmon and stuff, get those nets out of the water. That might be part of the problem right there, take some of that money, teach these people here you don't have to take a shower two and three times a day. The coat you are wearing, how often do you wash that? Once a week? The clothes you wear, the showers you take —— recycled water in Texas, it's big. How many years has Texas been recycling their shower water? For years. Because there's a water shortage in Texas. Teach us how to recycle our water, not just to dump it down the sewers. That might be a big problem right there. The schools. What do you teach the kids in the schools? Socialism? Why don't you teach them how to recycle. Okay. You guys talk about all these problems you got, no wonder. Look, you're all sitting on your duffs there. If I sat on my duff and talked all day, I'd have problems, too.

RESPONSE
Thank you for your comments.

COMMENTER

Ed Sumpter

COMMENT
Hi, my name is Ed Sumpter, I live on the Dungeness River. I hope to stay there as much as I can. I just want to get up and say no, whatever you're selling, I'm not buying. I didn't like the way the meeting started when this gentleman sees an angry crowd and thinks he has to get everybody up there and say this is nothing to do with the private wells, and later we find out, oh, not yet, but the infrastructure is going to be in place for meeting our private wells and you want to play that down. But that's why we are here. We don't mean to be angry or mean to you, but we just want you to get our message, and that's our message; we don't want this. It's just like the income tax was only going to be 1% back in 1917. It was never about more than that. We don't have the money to enforce or take any farther —— don't worry about it. Well, look where we are at now and that's what I'm afraid we are headed. You're laying groundwork for other people perhaps to do a lot of damage in the future and I want to go on record as saying no. Thank you.

RESPONSE
Thank you for our comment. Please see our discussion regarding the applicability of the rule to exempt withdrawals on page 21.

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APPENDIX

[Included in print version]

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